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Writings of John Fiske

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THE DISCOVERY OF AMERICA

WITH SOME ACCOUNT OF ANCIENT AMERICA AND THE SPANISH CONQUEST

BY

JOHN FISKE

IN TWO VOLUMES

VOL. I.

Then I unbar the doors; my paths lead out
The exodus of nations; I disperse
Men to all shores that front the hoary main.
I too have arts and sorceries;
Illusion dwells forever with the wave.
I make some coast alluring, some lone isle
To distant men, who must go there or die.

EMERSON

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TO

EDWARD AUGUSTUS FREEMAN,

A SCHOLAR WHO INHERITS THE GIFT OF MIDAS, AND
TURNS INTO GOLD WHATEVER SUBJECT HE
TOUCHES, I DEDICATE THIS BOOK, WITH
GRATITUDE FOR ALL THAT HE
HAS TAUGHT ME

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PREFACE.

THE present work is the outcome of two lines of study pursued, with more or less interruption from other studies, for about thirty years. It will be observed that the book has two themes, as different in character as the themes for voice and piano in Schubert's "Frühlingsglaube," and yet so closely related that the one is needful for an adequate comprehension of the other. In order to view in their true perspective the series of events comprised in the Discovery of America, one needs to form a mental picture of that strange world of savagery and barbarism to which civilized Europeans were for the first time introduced in the course of the fifteenth and sixteenth centuries, in their voyages along the African coast, into the Indian and Pacific oceans, and across the Atlantic. Nothing that Europeans discovered during that stirring period was so remarkable as these antique phases of human society, the mere existence of which had scarcely been suspected, and the real character of which it has been left for the present generation to begin to understand. Nowhere was

this ancient society so full of instructive lessons as in aboriginal America, which had pursued its own course of development, cut off and isolated from the Old World, for probably more than fifty thousand years. The imperishable interest of those episodes in the Discovery of America known as the conquests of Mexico and Peru consists chiefly in the glimpses they afford us of this primitive world. It was not an uninhabited continent that the Spaniards found, and in order to comprehend the course of events it is necessary to know something about those social features that formed a large part of the burden of the letters of Columbus and Vespucius, and excited even more intense and general interest in Europe than the purely geographical questions suggested by the voyages of those great sailors. The descriptions of ancient America, therefore, which form a kind of background to the present work, need no apology.

It was the study of prehistoric Europe and of early Aryan institutions that led me by a natural sequence to the study of aboriginal America. In 1869, after sketching the plan of a book on our Aryan forefathers, I was turned aside for five years by writing "Cosmic Philosophy." During that interval I also wrote "Myths and Myth-Makers" as a side-work to the projected book on the Aryans, and as soon as the excursion into the field of general philosophy was ended, in 1874, the work on

that book was resumed. Fortunately it was not then carried to completion, for it would have been sadly antiquated by this time. The revolution in theory concerning the Aryans has been as remarkable as the revolution in chemical theory which some years ago introduced the New Chemistry. It is becoming eminently probable that the centre of diffusion of Aryan speech was much nearer to Lithuania than to any part of Central Asia, and it has for some time been quite clear that the state of society revealed in Homer and the Vedas is not at all like primitive society, but very far from it. By 1876 I had become convinced that there was no use in going on without widening the field of study. The conclusions of the Aryan school needed to be supplemented, and often seriously modified, by the study of the barbaric world, and it soon became manifest that for the study of barbarism there is no other field that for fruitfulness can be compared with aboriginal America.

This is because the progress of society was much slower in the western hemisphere than in the eastern, and in the days of Columbus and Cortes it had nowhere "caught up" to the points reached by the Egyptians of the Old Empire or by the builders of Mycenæ and Tiryns. In aboriginal America we therefore find states of society preserved in stages of development similar to those of our ancestral societies in the Old World long ages

before Homer and the Vedas. Many of the social phenomena of ancient Eurcpe are also found in aboriginal America, but always in a more primitive condition. The clan, phratry, and tribe among the Iroquois help us in many respects to get back tc the original conceptions of the gens, curia, and tribe among the Romans. We can better understand the growth of kingship of the Agamemnon type when we have studied the less developed type in Montezuma. The house-communities of the southern Slavs are full of interest for the student of the early phases of social evolution, but the Mandan round-house and the Zuñi pueblo carry us much deeper into the past. Aboriginal American institutions thus afford one of the richest fields in the world for the application of the comparative method, and the red Indian, viewed in this light, becomes one of the most interesting of men; for in studying him intelligently, one gets down into the stone age of human thought. No time should be lost in gathering whatever can be learned of his ideas and institutions, before their character has been wholly lost under the influence of white men. Under that influence many Indians have been quite transformed, while others have been as yet but little affected. Some extremely ancient types of society, still preserved on this continent in something like purity, are among the most instructive monuments of the past that can now be

found in the world. Such a type is that of the Moquis of northeastern Arizona. I have heard a rumour, which it is to be hoped is ill-founded, that there are persons who wish the United States government to interfere with this peaceful and self-respecting people, break up their pueblo life, scatter them in farmsteads, and otherwise compel them, against their own wishes, to change their habits and customs. If such a cruel and stupid thing were ever to be done, we might justly be said to have equalled or surpassed the folly of those Spaniards who used to make bonfires of Mexican hieroglyphics. It is hoped that the present book, in which of course it is impossible to do more than sketch the outlines and indicate the bearings of so vast a subject, will serve to awaken readers to the interest and importance of American archæology for the general study of the evolution of human society.

So much for the first and subsidiary theme. As for my principal theme, the Discovery of America, I was first drawn to it through its close relations with a subject which for some time chiefly occupied my mind, the history of the contact between the Aryan and Semitic worlds, and more particularly between Christians and Mussulmans about the shores of the Mediterranean. It is also interesting as part of the history of science, and furthermore as connected with the beginnings of

one of the most momentous events in the career of mankind, the colonization of the barbaric world by Europeans. Moreover, the discovery of America has its full share of the romantic fascination that belongs to most of the work of the Renaissance period. I have sought to exhibit these different aspects of the subject.

The present book is in all its parts written from the original sources of information. The work of modern scholars has of course been freely used, but never without full acknowledgment in text or notes, and seldom without independent verification from the original sources. Acknowledgments are chiefly due to Humboldt, Morgan, Bandelier, Major, Varnhagen, Markham, Helps, and Harrisse. To the last-named scholar I owe an especial debt of gratitude, in common with all who have studied this subject since his arduous researches were begun. Some of the most valuable parts of his work have consisted in the discovery, reproduction, and collation of documents; and to some extent his pages are practically equivalent to the original sources inspected by him in the course of years of search through European archives, public and private. In the present book I must have expressed dissent from his conclusions at least as often as agreement with them, but whether one agrees with him or not, one always finds him helpful and stimulating. Though he has in some sort made

himself a Frenchman in the course of his labours, it is pleasant to recall the fact that M. Harrisse is by birth our fellow-countryman; and there are surely few Americans of our time whom students of history have more reason for holding in honour.

I have not seen Mr. Winsor's "Christopher Columbus" in time to make any use of it. Within the last few days, while my final chapter is going to press, I have received the sheets of it, a few days in advance of publication. I do not find in it any references to sources of information which I have not already fully considered, so that our differences of opinion on sundry points may serve to show what diverse conclusions may be drawn from the same data. The most conspicuous difference is that which concerns the personal character of Columbus. Mr. Winsor writes in a spirit of energetic (not to say violent) reaction against the absurdities of Roselly de Lorgues and others who have tried to make a saint of Columbus; and under the influence of this reaction he offers us a picture of the great navigator that serves to raise a pertinent question. No one can deny that Las Casas was a keen judge of men, or that his standard of right and wrong was quite as lofty as any one has reached in our own time. He had a much more intimate knowledge of Columbus than any modern historian can ever hope to acquire, and he

always speaks of him with warm admiration and respect. But how could Las Casas ever have respected the feeble, mean-spirited driveller whose portrait Mr. Winsor asks us to accept as that of the Discoverer of America?

If, however, instead of his biographical estimate of Columbus, we consider Mr. Winsor's contributions toward a correct statement of the difficult geographical questions connected with the subject, we recognize at once the work of an acknowledged master in his chosen field. It is work, too, of the first order of importance. It would be hard to mention a subject on which so many reams of direful nonsense have been written as on the discovery of America; and the prolific source of so much folly has generally been what Mr. Freeman fitly calls "bondage to the modern map." In order to understand what the great mariners of the fifteenth and sixteenth centuries were trying to do, and what people supposed them to have done, one must begin by resolutely banishing the modern map from one's mind. The ancient map must take its place, but this must not be the ridiculous "Orbis Veteribus Notus," to be found in the ordinary classical atlas, *which simply copies the outlines of countries with modern accuracy from the modern map, and then scatters ancient names over them!* Such maps are worse than useless. In dealing with the discovery of America one must steadily keep before

one's mind the quaint notions of ancient geographers, especially Ptolemy and Mela, as portrayed upon such maps as are reproduced in the present volume. It was just these distorted and hazy notions that swayed the minds and guided the movements of the great discoverers, and went on reproducing themselves upon newly-made maps for a century or more after the time of Columbus. Without constant reference to these old maps one cannot begin to understand the circumstances of the discovery of America.

In no way can one get at the heart of the matter more completely than by threading the labyrinth of causes and effects through which the western hemisphere came slowly and gradually to be known by the name AMERICA. The reader will not fail to observe the pains which I have taken to elucidate this subject, not from any peculiar regard for Americus Vespucius, but because the quintessence of the whole geographical problem of the discovery of the New World is in one way or another involved in the discussion. I can think of no finer instance of the queer complications that can come to surround and mystify an increase of knowledge too great and rapid to be comprehended by a single generation of men.

In the solution of the problem as to the first Vespucius voyage I follow the lead of Varnhagen, but always independently and with the documen-

tary evidence fully in sight. For some years I vainly tried to pursue Humboldt's clues to some intelligible conclusion, and felt inhospitably inclined toward Varnhagen's views as altogether too plausible; he seemed to settle too many difficulties at once. But after becoming convinced of the spuriousness of the Bandini letter (see below, vol. ii. p. 94); and observing how the air at once was cleared in some directions, it seemed that further work in textual criticism would be well bestowed. I made a careful study of the diction of the letter from Vespucius to Soderini in its two principal texts: — 1. the Latin version of 1507, the original of which is in the library of Harvard University, appended to Waldseemüller's "Cosmographiæ Introductio"; 2. the Italian text reproduced severally by Bandini, Canovai, and Varnhagen, from the excessively rare original, of which only five copies are now known to be in existence. It is this text that Varnhagen regards as the original from which the Latin version of 1507 was made, through an intermediate French version now lost. In this opinion Varnhagen does not stand alone, as Mr. Winsor seems to think ("Christopher Columbus," p. 540, line 5 from bottom), for Harrisse and Avezac have expressed themselves plainly to the same effect (see below, vol. ii. p. 42). A minute study of this text, with all its quaint interpolations of Spanish and

Portuguese idioms and seafaring phrases into the Italian ground-work of its diction, long ago convinced me that it never was a *translation* from anything in heaven or earth or the waters under the earth. Nobody would ever have translated a document *into* such an extremely peculiar and individual jargon. It is most assuredly an original text, and its author was either Vespucius or the Old Nick. It was by starting from this text as primitive that Varnhagen started correctly in his interpretation of the statements in the letter, and it was for that reason that he was able to dispose of so many difficulties at one blow. When he showed that the landfall of Vespucius on his first voyage was near Cape Honduras and had nothing whatever to do with the Pearl Coast, he began to follow the right trail, and so the facts which had puzzled everybody began at once to fall into the right places. This is all made clear in the seventh chapter of the present work, where the general argument of Varnhagen is in many points strongly reinforced. The evidence here set forth in connection with the Cantino map is especially significant.

It is interesting on many accounts to see the first voyage of Vespucius thus elucidated, though it had no connection with the application of his name by Waldseemüller to an entirely different region from any that was visited upon that voyage.

The real significance of the third voyage of Vespucius, in connection with the naming of America, is now set forth, I believe, for the first time in the light thrown upon the subject by the opinions of Ptolemy and Mela. Neither Humboldt nor Major nor Harrisse nor Varnhagen seems to have had a firm grasp of what was in Waldseemüller's mind when he wrote the passage photographed below in vol. ii. p. 136 of this work. It is only when we keep the Greek and Roman theories in the foreground and unflinchingly bar out that intrusive modern atlas, that we realize what the Freiburg geographer meant and why Ferdinand Columbus was not in the least shocked or surprised.

I have at various times given lectures on the discovery of America and questions connected therewith, more especially at University College, London, in 1879, at the Philosophical Institution in Edinburgh, in 1880, at the Lowell Institute in Boston, in 1890, and in the course of my work as professor in the Washington University at St. Louis; but the present work is in no sense whatever a reproduction of such lectures.

Acknowledgments are due to Mr. Winsor for his cordial permission to make use of a number of reproductions of old maps and facsimiles already used by him in the "Narrative and Critical History of America;" they are mentioned in the lists

of illustrations. I have also to thank Dr. Brinton for allowing me to reproduce a page of old Mexican music, and the Hakluyt Society for permission to use the Zeno and Catalan maps and the view of Kakortok church. Dr. Fewkes has very kindly favoured me with a sight of proof-sheets of some recent monographs by Bandelier. And for courteous assistance at various libraries I have most particularly to thank Mr. Kiernan of Harvard University, Mr. Appleton Griffin of the Boston Public Library, and Mr. Uhler of the Peabody Institute in Baltimore.

There is one thing which I feel obliged, though with extreme hesitation and reluctance, to say to my readers in this place, because the time has come when something ought to be said, and there seems to be no other place available for saying it. For many years letters — often in a high degree interesting and pleasant to receive — have been coming to me from persons with whom I am not acquainted, and I have always done my best to answer them. It is a long time since such letters came to form the larger part of a voluminous mass of correspondence. The physical fact has assumed dimensions with which it is no longer possible to cope. If I were to answer all the letters which arrive by every mail, I should never be able to do another day's work. It is becoming impossible

even to *read* them all; and there is scarcely time for giving due attention to one in ten. Kind friends and readers will thus understand that if their queries seem to be neglected, it is by no means from any want of good will, but simply from the lamentable fact that the day contains only four-and-twenty hours.

CAMBRIDGE, *October* 25, 1891.

CONTENTS.

CHAPTER I.

ANCIENT AMERICA.

	PAGE
The American aborigines	1
Question as to their origin	2, 3
Antiquity of man in America	4
Shell-mounds, or middens	4, 5
The Glacial Period	6, 7
Discoveries in the Trenton gravel	8
Discoveries in Ohio, Indiana, and Minnesota	9
Mr. Cresson's discovery at Claymont, Delaware	10
The Calaveras skull	11
Pleistocene men and mammals	12, 13
Elevation and subsidence	13, 14
Waves of migration	15
The Cave men of Europe in the Glacial Period	16
The Eskimos are probably a remnant of the Cave men	17–19
There was probably no connection or intercourse by water between ancient America and the Old World	20
There is one great American red race	21
Different senses in which the word "race" is used	21–23
No necessary connection between differences in culture and differences in race	23
Mr. Lewis Morgan's classification of grades of culture	24–32
Distinction between Savagery and Barbarism	25
Origin of pottery	25
Lower, middle, and upper status of savagery	26
Lower status of barbarism; it ended differently in the two hemispheres; in ancient America there was no pastoral stage of development	27

Importance of Indian corn 28
Tillage with irrigation 29
Use of adobe-brick and stone in building . . 29
Middle status of barbarism 29, 30
Stone and copper tools 30
Working of metals ; smelting of iron 30
Upper status of barbarism 31
The alphabet and the beginnings of civilization . . 32
So-called "civilizations" of Mexico and Peru . 33, 34
Loose use of the words "savagery" and "civilization" 35
Value and importance of the term "barbarism" . 35, 36
The status of barbarism is most completely exemplified in ancient America 36, 37
Survival of bygone epochs of culture ; work of the Bureau of Ethnology 37, 38
Tribal society and multiplicity of languages in aboriginal America 38, 39
Tribes in the upper status of savagery ; Athabaskans, Apaches, Shoshones, etc. 39
Tribes in the lower status of barbarism ; the Dakota group or family 40
The Minnitarees and Mandans 41
The Pawnee and Arickaree group 42
The Maskoki group 42
The Algonquin group 43
The Huron-Iroquois group 44
The Five Nations 45–47
Distinction between horticulture and field agriculture . 48
Perpetual intertribal warfare, with torture and cannibalism 49–51
Myths and folk-lore 51
Ancient law 52, 53
The patriarchal family not primitive 53
"Mother-right" 54
Primitive marriage 55
The system of reckoning kinship through females only 56
Original reason for the system 57
The primeval human horde 58, 59
Earliest family-group ; the clan 60
"Exogamy" 60

Phratry and tribe 61
Effect of pastoral life upon property and upon the family 61–63
The exogamous clan in ancient America . . . 64
Intimate connection of aboriginal architecture with social life 65
The long houses of the Iroquois 66, 67
Summary divorce 68
Hospitality 68
Structure of the clan 69, 70
Origin and structure of the phratry . . . 70, 71
Structure of the tribe 72
Cross-relationships between clans and tribes; the Iroquois Confederacy 72–74
Structure of the confederacy 75, 76
The "Long House" 76
Symmetrical development of institutions in ancient America 77, 78
Circular houses of the Mandans 79–81
The Indians of the pueblos, in the middle status of barbarism 82, 83
Horticulture with irrigation, and architecture with adobe 83, 84
Possible origin of adobe architecture . . . 84, 85
Mr. Cushing's sojourn at Zuñi 86
Typical structure of the pueblo 86–88
Pueblo society 89
Wonderful ancient pueblos in the Chaco valley . 90–92
The Moqui pueblos 93
The cliff-dwellings 93
Pueblo of Zuñi 93, 94
Pueblo of Tlascala 94–96
The ancient city of Mexico was a great composite pueblo 97
The Spanish discoverers could not be expected to understand the state of society which they found there 97, 98
Contrast between feudalism and gentilism . . . 98
Change from gentile society to political society in Greece and Rome 99, 100

First suspicions as to the erroneousness of the Spanish accounts 101
Detection and explanation of the errors, by Lewis Morgan 102
Adolf Bandelier's researches 103
The Aztec Confederacy 104, 105
Aztec clans 106
Clan officers 107
Rights and duties of the clan 108
Aztec phratries 108
The *tlatocan*, or tribal council 109
The *cihuacoatl*, or "snake-woman" 110
The *tlacatecuhtli*, or "chief-of-men" 111
Evolution of kingship in Greece and Rome 112
Mediæval kingship 113
Montezuma was a "priest-commander" 114
Mode of succession to the office 114, 115
Manner of collecting tribute 116
Mexican roads 117
Aztec and Iroquois confederacies contrasted . . 118
Aztec priesthood; human sacrifices 119, 120
Aztec slaves 121, 122
The Aztec family 122, 123
Aztec property 124
Mr. Morgan's rules of criticism 125
He sometimes disregarded his own rules . . . 126
Amusing illustrations from his remarks on "Montezuma's Dinner" 126–128
The reaction against uncritical and exaggerated statements was often carried too far by Mr. Morgan 128, 129
Great importance of the middle period of barbarism . 130
The Mexicans compared with the Mayas . . 131–133
Maya hieroglyphic writing 132
Ruined cities of Central America . . . 134–138
They are probably not older than the twelfth century 136
Recent discovery of the Chronicle of Chicxulub . . 138
Maya culture very closely related to Mexican . . 139
The "Mound-Builders" 140–146
The notion that they were like the Aztecs . . . 142
Or, perhaps, like the Zuñis 143

These notions are not well sustained 144
The mounds were probably built by different peoples in the lower status of barbarism, by Cherokees, Shawnees, and other tribes 144, 145
It is not likely that there was a "race of Mound Builders" 146
Society in America at the time of the Discovery had reached stages similar to stages reached by eastern Mediterranean peoples fifty or sixty centuries earlier 146, 147

CHAPTER II.

PRE-COLUMBIAN VOYAGES.

Stories of voyages to America before Columbus; the Chinese 148
The Irish 149
Blowing and drifting; Cousin, of Dieppe . . . 150
These stories are of small value 150
But the case of the Northmen is quite different . . 151
The Viking exodus from Norway . . . 151, 152
Founding of a colony in Iceland, A. D. 874 . . . 153
Icelandic literature 154
Discovery of Greenland, A. D. 876 . . . 155, 156
Eric the Red, and his colony in Greenland, A. D. 986 157–161
Voyage of Bjarni Herjulfsson 162
Conversion of the Northmen to Christianity . . 163
Leif Ericsson's voyage, A. D. 1000; Helluland and Markland 164
Leif's winter in Vinland 165, 166
Voyages of Thorvald and Thorstein 167
Thorfinn Karlsefni, and his unsuccessful attempt to found a colony in Vinland, A. D. 1007–10 . 167–169
Freydis, and her evil deeds in Vinland, 1011–12 170, 171
Voyage into Baffin's Bay, 1135 172
Description of a Viking ship discovered at Sandefiord, in Norway 173–175

To what extent the climate of Greenland may have changed within the last thousand years . . 176, 177
With the Northmen once in Greenland, the discovery of the American continent was inevitable . . 178
Ear-marks of truth in the Icelandic narratives . 179, 180
Northern limit of the vine 181
Length of the winter day 182
Indian corn 182, 183
Winter weather in Vinland 184
Vinland was probably situated somewhere between Cape Breton and Point Judith 185
Further ear-marks of truth ; savages and barbarians of the lower status were unknown to mediæval Europeans 185, 186
The natives of Vinland as described in the Icelandic narratives 187–193
Meaning of the epithet "Skrælings" . . . 188, 189
Personal appearance of the Skrælings 189
The Skrælings of Vinland were Indians, — very likely Algonquins 190
The "balista" or "demon's head" . . . 191, 192
The story of the "uniped" 193
Character of the Icelandic records ; misleading associations with the word "saga" 194
The comparison between Leif Ericsson and Agamemnon, made by a committee of the Massachusetts Historical Society, was peculiarly unfortunate and inappropriate 194, 197
The story of the Trojan War, in the shape in which we find it in Greek poetry, is pure folk-lore . . . 195
The Saga of Eric the Red is not folk-lore . . . 196
Mythical and historical sagas 197
The western or Hauks-bók version of Eric the Red's Saga 198
The northern or Flateyar-bók version 199
Presumption against sources not contemporary . . 200
Hauk Erlendsson and his manuscripts . . . 201
The story is not likely to have been preserved to Hauk's time by oral tradition only 202
Allusions to Vinland in other Icelandic documents 202–207

Eyrbyggja Saga 203
The abbot Nikulas, etc. 204
Ari Fródhi and his works 204
His significant allusion to Vinland 205
Other references 206
Differences between Hauks-bók and Flateyar-bók versions 207
Adam of Bremen 208
Importance of his testimony 209
His misconception of the situation of Vinland . . 210
Summary of the argument 211–213
Absurd speculations of zealous antiquarians . 213–215
The Dighton inscription was made by Algonquins, and has nothing to do with the Northmen . . 213, 214
Governor Arnold's stone windmill 215
There is no reason for supposing that the Northmen founded a colony in Vinland 216
No archæological remains of them have been found south of Davis strait 217
If the Northmen had founded a successful colony, they would have introduced domestic cattle into the North American fauna 218
And such animals could not have vanished and left no trace of their existence 219, 220
Further fortunes of the Greenland colony . . . 221
Bishop Eric's voyage in search of Vinland, 1121 . . 222
The ship from Markland, 1347 223
The Greenland colony attacked by Eskimos, 1349 . 224
Queen Margaret's monopoly, and its baneful effects . 225
Story of the Venetian brothers, Nicolò and Antonio Zeno 226
Nicolò Zeno wrecked upon one of the Færoe islands . 227
He enters the service of Henry Sinclair, Earl of the Orkneys and Caithness 228
Nicolò's voyage to Greenland, cir. 1394 . . . 229
Voyage of Earl Sinclair and Antonio Zeno . . 229, 230
Publication of the remains of the documents by the younger Nicolò Zeno, 1558 231
The Zeno map 232, 233
Queer transformations of names 234–236

The name *Fœroislander* became *Frislanda* . . . 236
The narrative nowhere makes a claim to the "discovery of America" 237
The "Zichmni" of the narrative means Henry Sinclair 238
Bardsen's "Description of Greenland" . . . 239
The monastery of St. Olaus and its hot spring . . 240
Volcanoes of the north Atlantic ridge 241
Fate of Gunnbjörn's Skerries, 1456 242
Volcanic phenomena in Greenland . . . 242, 243
Estotiland 244
Drogio 245
Inhabitants of Drogio and the countries beyond . . 246
The Fisherman's return to Frislanda 247
Was the account of Drogio woven into the narrative by the younger Nicolò? 248
Or does it represent actual experiences in North America? 249
The case of David Ingram, 1568 250
The case of Cabeza de Vaca, 1528–36 251
There may have been unrecorded instances of visits to North America 252
The pre-Columbian voyages made no real contributions to geographical knowledge 253
And were in no true sense a discovery of America . 254
Real contact between the eastern and western hemisphere was first established by Columbus . . 255

CHAPTER III.

EUROPE AND CATHAY.

Why the voyages of the Northmen were not followed up 256
Ignorance of their geographical significance . . 257
Lack of instruments for ocean navigation . . . 257
Condition of Europe in the year 1000 . . . 258, 259
It was not such as to favour colonial enterprise . . 260
The outlook of Europe was toward Asia . . . 261
Routes of trade between Europe and Asia . . . 262

Claudius Ptolemy and his knowledge of the earth . 263
Early mention of China 264
The monk Cosmas Indicopleustes 265
Shape of the earth, according to Cosmas . . 266, 267
His knowledge of Asia 268
The Nestorians 268
Effects of the Saracen conquests 269
Constantinople in the twelfth century 270
The Crusades 270–274
Barbarizing character of Turkish conquest . . . 271
General effects of the Crusades 272
The Fourth Crusade 273
Rivalry between Venice and Genoa 274
Centres and routes of mediæval trade . . 275, 276
Effects of the Mongol conquests 277
Cathay, origin of the name 277
Carpini and Rubruquis 278
First knowledge of an eastern ocean beyond Cathay . 278
The data were thus prepared for Columbus ; but as yet nobody reasoned from these data to a practical conclusion 279
The Polo brothers 280
Kublai Khan's message to the Pope 281
Marco Polo and his travels in Asia . . . 281, 282
First recorded voyage of Europeans around the Indo-Chinese peninsula 282
Return of the Polos to Venice 283
Marco Polo's book, written in prison at Genoa, 1299 ; its great contributions to geographical knowledge 284, 285
Prester John 285
Griffins and Arimaspians 286
The Catalan map, 1375 . . . . . 288, 289
Other visits to China 287–291
Overthrow of the Mongol dynasty, and shutting up of China 291
First rumours of the Molucca islands and Japan . . 292
The accustomed routes of Oriental trade were cut off in the fifteenth century by the Ottoman Turks . 293
Necessity for finding an "outside route to the Indies" 294

CHAPTER IV.

THE SEARCH FOR THE INDIES.

EASTWARD OR PORTUGUESE ROUTE.

Question as to whether Asia could be reached by sailing around Africa 295
Views of Eratosthenes 296
Opposing theory of Ptolemy 297
Story of the Phœnician voyage in the time of Necho 298–300
Voyage of Hanno 300, 301
Voyages of Sataspes and Eudoxus 302
Wild exaggerations 303
Views of Pomponius Mela 304, 305
Ancient theory of the five zones 306, 307
The Inhabited World, or Œcumene, and the Antipodes 308
Curious notions about Taprobane (Ceylon) . . . 309
Question as to the possibility of crossing the torrid zone 309
Notions about sailing "up and down hill" . . 310, 311
Superstitious fancies 311, 312
Clumsiness of ships in the fifteenth century . . 312
Dangers from famine and scurvy 313
The mariner's compass; an interesting letter from Brunetto Latini to Guido Cavalcanti . . . 313–315
Calculating latitudes and longitudes 315
Prince Henry the Navigator 316–326
His idea of an ocean route to the Indies, and what it might bring 318
The Sacred Promontory 319
The Madeira and Canary islands . . . 320–322
Gil Eannes passes Cape Bojador 323
Beginning of the modern slave-trade, 1442 . . . 323
Papal grant of heathen countries to the Portuguese crown 324, 325
Advance to Sierra Leone 326
Advance to the Hottentot coast 326, 327
Note upon the extent of European acquaintance with

savagery and the lower forms of barbarism previous to the fifteenth century 327–329
Effect of the Portuguese discoveries upon the theories of Ptolemy and Mela 329, 330
News of Prester John ; Covilham's journey . . 331
Bartholomew Dias passes the Cape of Good Hope and enters the Indian ocean 332
Some effects of this discovery 333
Bartholomew Columbus took part in it . . . 333
Connection between these voyages and the work of Christopher Columbus 334

CHAPTER V.

THE SEARCH FOR THE INDIES.

WESTWARD OR SPANISH ROUTE.

Sources of information concerning the life of Columbus ; Las Casas and Ferdinand Columbus . . 335
The Biblioteca Colombina at Seville . . . 336, 337
Bernaldez and Peter Martyr 338
Letters of Columbus 338
Defects in Ferdinand's information . . . 339, 340
Researches of Henry Harrisse 341
Date of the birth of Columbus ; archives of Savona . 342
Statement of Bernaldez 343
Columbus's letter of September, 1501 344
The balance of probability is in favour of 1436 . . 345
The family of Domenico Colombo, and its changes of residence 346, 347
Columbus tells us that he was born in the city of Genoa 348
His early years 349–351
Christopher and his brother Bartholomew at Lisbon 351, 352
Philippa Moñiz de Perestrelo 352
Personal appearance of Columbus 353
His marriage, and life upon the island of Porto Santo 353, 354
The king of Portugal asks advice of the great astronomer Toscanelli 355

Toscanelli's first letter to Columbus . . . 356–361
His second letter to Columbus 361, 362
Who first suggested the feasibleness of a westward route to the Indies? Was it Columbus? . . 363
Perhaps it was Toscanelli 363, 364
Note on the date of Toscanelli's first letter to Columbus 365–367
The idea, being naturally suggested by the globular form of the earth, was as old as Aristotle . 368, 369
Opinions of ancient writers 370
Opinions of Christian writers 371
The "Imago Mundi" of Petrus Alliacus . . 372, 373
Ancient estimates of the size of the globe and the length of the Œcumene 374
Toscanelli's calculation of the size of the earth, and of the position of Japan (Cipango) . . . 375, 376
Columbus's opinions of the size of the globe, the length of the Œcumene, and the width of the Atlantic ocean from Portugal to Japan . . . 377–380
There was a fortunate mixture of truth and error in these opinions of Columbus 381
The whole point and purport of Columbus's scheme lay in its promise of a route to the Indies shorter than that which the Portuguese were seeking by way of Guinea 381
Columbus's speculations on climate; his voyages to Guinea and into the Arctic ocean 382
He may have reached Jan Mayen island, and stopped at Iceland 383, 384
The Scandinavian hypothesis that Columbus "must have" heard and understood the story of the Vinland voyages 384, 385
It has not a particle of evidence in its favour . . 385
It is not probable that Columbus knew of Adam of Bremen's allusion to Vinland, or that he would have understood it if he had read it 386
It is doubtful if he would have stumbled upon the story in Iceland 387
If he had heard it, he would probably have classed it with such tales as that of St. Brandan's isle . . 388

He could not possibly have obtained from such a source his opinion of the width of the ocean . 388, 389
If he had known and understood the Vinland story, he had the strongest motives for proclaiming it and no motive whatever for concealing it . . . 390–392
No trace of a thought of Vinland appears in any of his voyages 393
Why did not Norway or Iceland utter a protest in 1493? 393
The idea of Vinland was not associated with the idea of America until the seventeenth century . . 394
Recapitulation of the genesis of Columbus's scheme . 395
Martin Behaim's improved astrolabe . . . 395, 396
Negotiations of Columbus with John II. of Portugal 396, 397
The king is persuaded into a shabby trick . . . 398
Columbus leaves Portugal and enters into the service of Ferdinand and Isabella, 1486 . . . 398–400
The junto at Salamanca, 1486 401
Birth of Ferdinand Columbus, August 15, 1488 . . 401
Bartholomew Columbus returns from the Cape of Good Hope, December, 1487 . . . . . 402, 403
Christopher visits Bartholomew at Lisbon, cir. September, 1488, and sends him to England . . 404
Bartholomew, after mishaps, reaches England cir. February, 1490, and goes thence to France before 1492 405–407
The duke of Medina-Celi proposes to furnish the ships for Columbus, but the queen withholds her consent 408, 409
Columbus makes up his mind to get his family together and go to France, October, 1491 . 409, 410
A change of fortune; he stops at La Rábida, and meets the prior Juan Perez, who writes to the queen . 411
Columbus is summoned back to court 411
The junto before Granada, December, 1491 . 412, 413
Surrender of Granada, January 2, 1492 . . . 414
Columbus negotiates with the queen, who considers his terms exorbitant 414–416
Interposition of Luis de Santangel 416

Agreement between Columbus and the sovereigns . 417
Cost of the voyage 418
Dismay at Palos 419
The three famous caravels 420
Delay at the Canary islands 421
Martin Behaim and his globe 422, 423
Columbus starts for Japan, September 6, 1492 . . 424
Terrors of the voyage : — 1. Deflection of the needle . 425
2. The Sargasso sea 426, 427
3. The trade wind 428
Impatience of the crews 428
Change of course from W. to W. S. W . . 429, 430
Discovery of land, October 12, 1492 431
Guanahani : which of the Bahama islands was it ? . 432
Groping for Cipango and the route to Quinsay . 433, 434
Columbus reaches Cuba, and sends envoys to find a certain Asiatic prince 434, 435
He turns eastward and Pinzon deserts him . . . 435
Columbus arrives at Hayti and thinks it must be Japan 436
His flagship is wrecked, and he decides to go back to Spain 437
Building of the blockhouse, La Navidad . . . 438
Terrible storm in mid-ocean on the return voyage . 439
Cold reception at the Azores 440
Columbus is driven ashore in Portugal, where the king is advised to have him assassinated 440
But to offend Spain so grossly would be imprudent . 441
Arrival of Columbus and Pinzon at Palos ; death of Pinzon 442
Columbus is received by the sovereigns at Barcelona 443, 444
General excitement at the news that a way to the Indies had been found 445
This voyage was an event without any parallel in history 446

CHAPTER VI.

THE FINDING OF STRANGE COASTS.

The Discovery of America was a gradual process 447, 448
The letters of Columbus to Santangel and to Sanchez . 449
Versification of the story by Giuliano Dati . . . 450
Earliest references to the discovery 451
The earliest reference in English 452
The Portuguese claim to the Indies 453
Bulls of Pope Alexander VI. 454–458
The treaty of Tordesillas 459
Juan Rodriguez Fonseca, and his relations with Columbus 460–462
Friar Boyle 462
Notable persons who embarked on the second voyage . 463
Departure from Cadiz 464
Cruise among the Cannibal (Caribbee) islands . . 465
Fate of the colony at La Navidad 466
Building the town of Isabella 467
Exploration of Cibao 467, 468
Westward cruise ; Cape Alpha and Omega . 468–470
Discovery of Jamaica 471
Coasting the south side of Cuba 472
The "people of Mangon" 473
Speculations concerning the Golden Chersonese . 474–476
A solemn expression of opinion 477
Vicissitudes of theory 477, 478
Arrival of Bartholomew Columbus in Hispaniola 478, 479
Mutiny in Hispaniola ; desertion of Boyle and Margarite 479, 480
The government of Columbus was not tyrannical . 481
Troubles with the Indians 481, 482
Mission of Juan Aguado 482
Discovery of gold mines, and speculations about Ophir 483
Founding of San Domingo, 1496 484
The return voyage to Spain 485
Edicts of 1495 and 1497 . . . . . 486, 487
Vexatious conduct of Fonseca ; Columbus loses his temper 487

Departure from San Lucar on the third voyage . . 488
The belt of calms 489–491
Trinidad and the Orinoco 491, 492
Speculations as to the earth's shape; the mountain of Paradise 494
Relation of the "Eden continent" to "Cochin China" 495
Discovery of the Pearl Coast 495
Columbus arrives at San Domingo 496
Roldan's rebellion and Fonseca's machinations . 496, 497
Gama's voyage to Hindustan, 1497 498
Fonseca's creature, Bobadilla, sent to investigate the troubles in Hispaniola 499
He imprisons Columbus 500
And sends him in chains to Spain 501
Release of Columbus; his interview with the sovereigns 502
How far were the sovereigns responsible for Bobadilla? 503
Ovando, another creature of Fonseca, appointed governor of Hispaniola 503, 504
Purpose of Columbus's fourth voyage, to find a passage from the Caribbee waters into the Indian ocean 504, 506
The voyage across the Atlantic 506
Columbus not allowed to stop at San Domingo . . 507
His arrival at Cape Honduras 508
Cape Gracias a Dios, and the coast of Veragua . . 509
Fruitless search for the strait of Malacca . . . 510
Futile attempt to make a settlement in Veragua . 511
Columbus is shipwrecked on the coast of Jamaica; shameful conduct of Ovando 512
Columbus's last return to Spain 513
His death at Valladolid, May 20, 1506 . . . 513
"Nuevo Mundo;" arms of Ferdinand Columbus 514, 515
When Columbus died, the fact that a New World had been discovered by him had not yet begun to dawn upon his mind, or upon the mind of any voyager or any writer 515, 516

ILLUSTRATIONS.

PAGE

View and ground-plan of Seneca-Iroquois long house *reduced from Morgan's Houses and House-Life of the American Aborigines* 66

View, cross-section, and ground-plan of Mandan round house, *ditto* 80

Ground-plan of Pueblo Hungo Pavie, *ditto* . . . 86

Restoration of Pueblo Hungo Pavie, *ditto* . . . 88

Restoration of Pueblo Bonito, *ditto* 90

Ground-plan of Pueblo Peñasca Blanca, *ditto* . . 92

Ground-plan of so-called "House of the Nuns" at Uxmal, *ditto* 153

Map of the East Bygd, or eastern settlement of the Northmen in Greenland, *reduced from Rafn's Antiquitates Americanæ* 160, 161

Ruins of the church at Kakortok, *from Major's Voyages of the Zeni, published by the Hakluyt Society* . . 222

Zeno Map, cir. 1400, *ditto* 232, 233

Map of the World according to Claudius Ptolemy, cir. A. D. 150, *an abridged sketch after a map in Bunbury's History of Ancient Geography* . *Facing* 265

Two sheets of the Catalan Map, 1375, *from Yule's Cathay, published by the Hakluyt Society* . . 288, 289

Map of the World according to Pomponius Mela, cir. A. D. 50, *from Winsor's Narrative and Critical History of America* 304

Map illustrating Portuguese voyages on the coast of Africa, *from a sketch by the author* 324

Toscanelli's Map, 1474, *redrawn and improved from a sketch in Winsor's America* . . . *Facing* 351

Annotations by Columbus, *reduced from a photograph in Harrisse's Notes on Columbus* 373
Sketch of Martin Behaim's Globe, 1492, preserved in the city hall at Nuremberg, *reduced to Mercator's projection and sketched by the author* . . . 422, 423
Sketch of Martin Behaim's Atlantic Ocean, with outline of the American continent superimposed, *from Winsor's America* 429
Map of the discoveries made by Columbus in his first and second voyages, *sketched by the author* . . 469
Map of the discoveries made by Columbus in his third and fourth voyages, *ditto* 493
Arms of Ferdinand Columbus, *from the title-page of Harrisse's Fernand Colomb* 515

THE DISCOVERY OF AMERICA.

CHAPTER I.

ANCIENT AMERICA.

When the civilized people of Europe first became acquainted with the continents of North and South America, they found them inhabited by a race of men quite unlike any of the races with which they were familiar in the Old World. Between the various tribes of this aboriginal American race, except in the sub-arctic region, there is now seen to be a general physical likeness, such as to constitute an American type of mankind as clearly recognizable as those types which we call Mongolian and Malay, though far less pronounced than such types as the Australian or the negro. The most obvious characteristics possessed in common by the American aborigines are the copper-coloured or rather the cinnamon-coloured complexion, along with the high cheek-bones and small deepset eyes, the straight black hair and absence or scantiness of beard. With regard to stature, length of limbs, massiveness of frame, and shape of skull, considerable

The American aborigines.

divergencies may be noticed among the various American tribes, as indeed is also the case among the members of the white race in Europe, and of other races. With regard to culture the differences have been considerable, although, with two or three apparent but not real exceptions, there was nothing in pre-Columbian America that could properly be called civilization; the general condition of the people ranged all the way from savagery to barbarism of a high type.

Soon after America was proved not to be part of Asia, a puzzling question arose. Whence came these "Indians," and in what manner did they find their way to the western hemisphere. Since the beginning of the present century discoveries in geology have entirely altered our mental attitude toward this question. It was formerly argued upon the two assumptions that the geographical relations of land and water had been always pretty much the same as we now find them, and that all the racial differences among men have arisen since the date of the "Noachian Deluge," which was generally placed somewhere between two and three thousand years before the Christian era. Hence inasmuch as European tradition knows nothing of any such race as the Indians, it was supposed that at some time within the historic period they must have moved eastward from Asia into America; and thus "there was felt to be a sort of speculative necessity for discovering points of resemblance between American languages, myths, and social observances and those of the Oriental world. Now the abori-

Question as to their origin.

gines of this Continent were made out to be Kamtchatkans, and now Chinamen, and again they were shown, with quaint erudition, to be remnants of the ten tribes of Israel. Perhaps none of these theories have been exactly disproved, but they have all been superseded and laid on the shelf." [1]

[1] See my *Excursions of an Evolutionist*, p. 148. A good succinct account of these various theories, monuments of wasted ingenuity, is given in Short's *North Americans of Antiquity*, chap. iii. The most elaborate statement of the theory of an Israelite colonization of America is to be found in the ponderous tomes of Lord Kingsborough, *Mexican Antiquities*, London, 1831–48, 9 vols. elephant-folio. Such a theory was entertained by the author of that curious piece of literary imposture, *The Book of Mormon*. In this book we are told that, when the tongues were confounded at Babel, the Lord selected a certain Jared, with his family and friends, and instructed them to build eight ships, in which, after a voyage of 344 days, they were brought to America, where they "did build many mighty cities," and "prosper exceedingly." But after some centuries they perished because of their iniquities. In the reign of Zedekiah, when calamity was impending over Judah, two brothers, Nephi and Laman, under divine guidance led a colony to America. There, says the veracious chronicler, their descendants became great nations, and worked in *iron*, and had stuffs of *silk*, besides keeping plenty of *oxen* and *sheep*. (*Ether*, ix. 18, 19; x. 23, 24.) Christ appeared and wrought many wonderful works; people spake with tongues, and the dead were raised. (3 *Nephi*, xxvi. 14, 15.) But about the close of the fourth century of our era, a terrible war between Lamanites and Nephites ended in the destruction of the latter. Some two million warriors, with their wives and children, having been slaughtered, the prophet Mormon escaped, with his son Moroni, to the "hill Cumorah," hard by the "waters of Ripliancum," or Lake Ontario. (*Ether*, xv. 2, 8, 11.) There they hid the sacred tablets, which remained concealed until they were miraculously discovered and translated by Joseph Smith in 1827. There is, of course, no element of tradition in this story. It is all pure fiction, and of a very clumsy sort, such as might easily be devised by an ignorant man accustomed to the language of the Bible; and of course it was suggested by the old notion of the Israelitish origin of the red men. The references are to *The Book of Mormon*, Salt Lake City: Deseret News Co., 1885.

The tendency of modern discovery is indeed toward agreement with the time-honoured tradition which makes the Old World, and perhaps Asia, the earliest dwelling-place of mankind. Competition has been far more active in the fauna of the eastern hemisphere than in that of the western, natural selection has accordingly resulted in the evolution of higher forms, and it is there that we find both extinct and surviving species of man's nearest collateral relatives, those tailless half-human apes, the gorilla, chimpanzee, orang, and gibbon. It is altogether probable that the people whom the Spaniards found in America came by migration from the Old World. But it is by no means probable that their migration occurred within so short a period as five or six thousand years. A series of observations and discoveries kept up for the last half-century seem to show that North America has been continuously inhabited by human beings since the earliest Pleistocene times, if not earlier.

Antiquity of man in America.

The first group of these observations and discoveries relate to "middens" or shell-heaps. On the banks of the Damariscotta river in Maine are some of the most remarkable shell-heaps in the world. With an average thickness of six or seven feet, they rise in places to a height of twenty-five feet. They consist almost entirely of huge oyster-shells often ten inches in length and sometimes much longer. The shells belong to a salt-water species. In some places "there is an appearance of stratification covered by an alternation of shells and earth, as if the

Shell-mounds.

deposition of shells had been from time to time interrupted, and a vegetable mould had covered the surface." In these heaps have been found fragments of pottery and of the bones of such edible animals as the moose and deer. "At the very foundation of one of the highest heaps," in a situation which must for long ages have been undisturbed, Mr. Edward Morse "found the remains of an ancient fire-place, where he exhumed charcoal, bones, and pottery."[1] The significant circumstance is that "at the present time oysters are only found in very small numbers, too small to make it an object to gather them," and so far as memory and tradition can reach, such seems to have been the case. The great size of the heap, coupled with the notable change in the distribution of this mollusk since the heap was abandoned, implies a very considerable lapse of time since the vestiges of human occupation were first left here. Similar conclusions have been drawn from the banks or mounds of shells on the St. John's river in Florida,[2] on the Alabama river, at Grand Lake on the lower Mississippi, and at San Pablo in the bay of San Francisco. Thus at various points from Maine to California, and in connection with one particular kind of memorial, we find records of the presence of man at a period undoubtedly prehistoric, but not necessarily many thousands of years old.

[1] *Second Annual Report of the Peabody Museum of American Archæology*, etc., p. 18.

[2] Visited in 1866–74 by Professor Jeffries Wyman, and described in his *Fresh-Water Shell Mounds of the St. John's River*, Cambridge, 1875.

The second group of discoveries carries us back much farther, even into the earlier stages of that widespread glaciation which was the most remarkable feature of the Pleistocene period. At the periods of greatest cold "the continent of North America was deeply swathed in ice as far south as the latitude of Philadelphia, while glaciers descended into North Carolina." [1] The valleys of the Rocky Mountains also supported enormous glaciers, and a similar state of things existed at the same time in Europe. These periods of intense cold were alternated with long interglacial periods during which the climate was warmer than it is to-day. Concerning the antiquity of the Pleistocene age, which was characterized by such extraordinary vicissitudes of heat and cold, there has been, as in all questions relating to geological time, much conflict of opinion. Twenty years ago geologists often argued as if there were an unlimited fund of past time upon which to draw; but since Sir William Thomson and other physicists emphasized the point that in an antiquity very far from infinite this earth must have been a molten mass, there has been a reaction. In many instances further study has shown that less time was needed in order to effect a given change than had formerly been supposed; and so there has grown up a tendency to shorten the time assigned to geological periods. Here, as in so many other cases, the truth is doubtless to be sought within the extremes. If we adopt the magnificent argument of Dr. Croll, which seems

The Glacial Period.

[1] *Excursions of an Evolutionist*, p. 39.

to me still to hold its ground against all adverse criticism,[1] and regard the Glacial epoch as coincident with the last period of high eccentricity of the earth's orbit, we obtain a result that is moderate and probable. That astronomical period began about 240,000 years ago and came to an end about 80,000 years ago. During this period the eccentricity was seldom less than .04, and at one time rose to .0569. At the present time the eccentricity is .0168, and nearly 800,000 years will pass before it attains such a point as it reached during the Glacial epoch. For the last 50,000 years the departure of the earth's orbit from a circular form has been exceptionally small.

Now the traces of the existence of men in North America during the Glacial epoch have in recent years been discovered in abundance, as for example, the palæolithic quartzite implements found in the drift near the city of St. Paul, which date from toward the close of the Glacial epoch;[2] the fragment of a human jaw found in the red clay deposited in Minnesota during an earlier part of

[1] Croll, *Climate and Time in their Geological Relations*, New York, 1875; *Discussions on Climate and Cosmology*, New York, 1886; Archibald Geikie, *Text Book of Geology*, pp. 23–29, 883–909, London, 1882; James Geikie, *The Great Ice Age*, pp. 94–136, New York, 1874; *Prehistoric Europe*, pp. 558–562, London, 1881; Wallace, *Island Life*, pp. 101–225, New York, 1881. Some objections to Croll's theory may be found in Wright's *Ice Age in North America*, pp. 405–505, 585–595, New York, 1889. I have given a brief account of the theory in my *Excursions of an Evolutionist*, pp. 57–76.

[2] See Miss F. E. Babbitt, "Vestiges of Glacial Man in Minnesota," in *Proceedings of the American Association*, vol. xxxii., 1883.

that epoch;[1] the noble collection of palæoliths found by Dr. C. C. Abbott in the Trenton gravels in New Jersey; and the more recent discoveries of Dr. Metz and Mr. H. T. Cresson.

The year 1873 marks an era in American archæology as memorable as the year 1841 in the investigation of the antiquity of man in Europe. With reference to these problems Dr. Abbott occupies a position similar to that of Boucher de Perthes in the Old World, and the Trenton valley is coming to be classic ground, like the valley of the Somme. In April, 1873, Dr. Abbott published his description of three rude implements which he had found some sixteen feet below the surface of the ground "in the gravels of a bluff overlooking the Delaware river." The implements were in place in an undisturbed deposit, and could not have found their way thither in any recent time; Dr. Abbott assigned them to the age of the Glacial drift. This was the beginning of a long series of investigations, in which Dr. Abbott's work was assisted and supplemented by Messrs. Whitney, Carr, Putnam, Shaler, Lewis, Wright, Haynes, Dawkins, and other eminent geologists and archæologists. By 1888 Dr. Abbott had obtained not less than 60 implements from various recorded depths in the gravel, while many others were found at depths not recorded or in the talus of the banks.[2] Three human skulls and other bones, along with the tusk

Discoveries in the Trenton gravel.

[1] See N. H. Winchell, *Annual Report of the State Geologist of Minnesota*, 1877, p. 60.

[2] Wright's *Ice Age in North America*, p. 516.

of a mastodon, have been discovered in the same gravel. Careful studies have been made of the conditions under which the gravel-banks were deposited and their probable age; and it is generally agreed that they date from the later portion of the Glacial period, or about the time of the final recession of the ice-sheet from this region. At that time, in its climate and general aspect, New York harbour must have been much like a Greenland fiord of the present day. In 1883 Professor Wright of Oberlin, after a careful study of the Trenton deposits and their relations to the terrace and gravel deposits to the westward, predicted that similar palæolithic implements would be found in Ohio. Two years afterward, the prediction was verified by Dr. Metz, who found a true palæolith of black flint at Madisonville, in the Little Miami valley, eight feet below the surface. Since then further discoveries have been made in the same neighbourhood by Dr. Metz, and in Jackson county, Indiana, by Mr. H. T. Cresson; and the existence of man in that part of America toward the close of the Glacial period may be regarded as definitely established. The discoveries of Miss Babbitt and Professor Winchell, in Minnesota, carry the conclusion still farther, and add to the probability of the existence of a human population all the way from the Atlantic coast to the upper Mississippi valley at that remote antiquity.

Discoveries in Ohio, Indiana, and Minnesota;

A still more remarkable discovery was made by Mr. Cresson in July, 1887, at Claymont, in the north of Delaware. In a deep cut of the Balti-

more and Ohio Railroad, in a stratum of Philadelphia red gravel and brick clay, Mr. Cresson obtained an unquestionable palæolith, and a few months afterward his diligent search was rewarded with another.[1] This formation dates from far back in the Glacial period. If we accept Dr. Croll's method of reckoning, we can hardly assign to it an antiquity less than 150,000 years.

and in Delaware.

[1] The chipped implements discovered by Messrs. Abbott, Metz, and Cresson, and by Miss Babbitt, are all on exhibition at the Peabody Museum in Cambridge, whither it is necessary to go if one would get a comprehensive view of the relics of interglacial man in North America. The collection of implements made by Dr. Abbott includes much more than the palæoliths already referred to. It is one of the most important collections in the world, and is worth a long journey to see. Containing more than 20,000 implements, all found within a very limited area in New Jersey, "as now arranged, the collection exhibits at one and the same time the sequence of peoples and phases of development in the valley of the Delaware, from palæolithic man, through the intermediate period, to the recent Indians, and the relative numerical proportion of the many forms of their implements, each in its time. . . . It is doubtful whether any similar collection exists from which a student can gather so much information at sight as in this, where the natural pebbles from the gravel begin the series, and the beautifully chipped points of chert, jasper, and quartz terminate it in one direction, and the polished celts and grooved stone axes in the other." There are three principal groups, — first, the interglacial palæoliths, secondly, the argillite points and flakes, and thirdly, the arrow-heads, knives, mortars and pestles, axes and hoes, ornamental stones, etc., of Indians of the recent period. Dr. Abbott's *Primitive Industry*, published in 1881, is a useful manual for studying this collection; and an account of his discoveries in the glacial gravels is given in *Reports of the Peabody Museum*, vol. ii. pp. 30–48, 225–258; see also vol. iii. p. 492. A succinct and judicious account of the whole subject is given by H. W. Haynes, "The Prehistoric Archæology of North America," in Winsor's *Narrative and Critical History*, vol. i. pp. 329–368.

But according to Professor Josiah Whitney there is reason for supposing that man existed in California at a still more remote period. The Calaveras skull. He holds that the famous skull discovered in 1866, in the gold-bearing gravels of Calaveras county, belongs to the Pliocene age.[1] If this be so, it seems to suggest an antiquity not less than twice as great as that just mentioned. The question as to the antiquity of the Calaveras skull is still hotly disputed among the foremost palæontologists, but as one reads the arguments one cannot help feeling that theoretical difficulties have put the objectors into a somewhat inhospitable attitude toward the evidence so ably presented by Professor Whitney. It has been too hastily assumed that, from the point of view of evolution, the existence of Pliocene man is improbable. Upon general considerations, however, we have strong reason for believing that human beings must have inhabited some portions of the earth throughout the whole duration of the Pliocene period, and it need not surprise us if their remains are presently discovered in more places than one.[2]

[1] J. D. Whitney, "The Auriferous Gravels of the Sierra Nevada," *Memoirs of the Museum of Comparative Zoölogy at Harvard College*, Cambridge, 1880, vol. vi.

[2] In an essay published in 1882 on "Europe before the Arrival of Man" (*Excursions of an Evolutionist*, pp. 1–40), I argued that if we are to find traces of the "missing link," or primordial stock of primates from which man has been derived, we must undoubtedly look for it in the Miocene (p. 36). I am pleased at finding the same opinion lately expressed by one of the highest living authorities. The case is thus stated by Alfred Russel Wallace "The evidence we now possess of the exact nature of the

Whatever may be the final outcome of the Calaveras controversy, there can be no doubt as to the existence of man in North America far back in early Pleistocene times. The men of the River-drift, who long dwelt in western Europe during

resemblance of man to the various species of anthropoid apes, shows us that he has little special affinity for any one rather than another species, while he differs from them all in several important characters in which they agree with each other. The conclusion to be drawn from these facts is, that his points of affinity connect him with the whole group while his special peculiarities equally separate him from the whole group, and that he must, therefore, have diverged from the common ancestral form before the existing types of anthropoid apes had diverged from each other. Now this divergence almost certainly took place as early as the Miocene period, because in the Upper Miocene deposits of western Europe remains of two species of ape have been found allied to the gibbons, one of them, dryopithecus, nearly as large as a man, and believed by M. Lartet to have approached man in its dentition more than the existing apes. We seem hardly, therefore, to have reached in the Upper Miocene the epoch of the common ancestor of man and the anthropoids." (*Darwinism*, p. 455, London, 1889.) Mr. Wallace goes on to answer the objection of Professor Boyd Dawkins, "that man did not probably exist in Pliocene times, because almost all the known mammalia of that epoch are distinct species from those now living on the earth, and that the same changes of the environment which led to the modification of other mammalian species would also have led to a change in man." This argument, at first sight apparently formidable, quite overlooks the fact that in the evolution of man there came a point after which variations in his intelligence were seized upon more and more exclusively by natural selection, to the comparative neglect of physical variations. After that point man changed but little in physical characteristics, except in size and complexity of brain. This is the theorem first propounded by Mr. Wallace in the *Anthropological Review*, May, 1864; restated in his *Contributions to Natural Selection*, chap. ix., in 1870; and further extended and developed by me in connection with the theory of man's origin first suggested in my lectures at Harvard in 1871, and worked out in *Cosmic Philosophy*, part ii., chapters xvi., xxi., xxii.

the milder intervals of the Glacial period, but seem to have become extinct toward the end of it, are well known to palæontologists through their bones and their rude tools. Contemporaneously with these Europeans of the River-drift there certainly lived some kind of men, of a similar low grade of culture, in the Mississippi valley and on both the Atlantic and Pacific slopes of North America. Along with these ancient Americans lived some terrestrial mammals that still survive, such as the elk, reindeer, prairie wolf, bison, musk-ox, and beaver; and many that have long been extinct, such as the mylodon, megatherium, megalonyx, mastodon, Siberian elephant, mammoth, at least six or seven species of ancestral horse, a huge bear similar to the cave bear of ancient Europe, a lion similar to the European cave lion, and a tiger as large as the modern tiger of Bengal.

Pleistocene men and mammals.

Now while the general relative positions of those stupendous abysses that hold the oceans do not appear to have undergone any considerable change since an extremely remote geological period, their shallow marginal portions have been repeatedly raised so as to add extensive territories to the edges of continents, and in some cases to convert archipelagoes into continents, and to join continents previously separated. Such elevation is followed in turn by an era of subsidence, and almost everywhere either the one process or the other is slowly going on. If you look at a model in relief of the continents and ocean-floors, such as may be seen at the Museum of Comparative Zoölogy in Cambridge,

showing the results of a vast number of soundings in all parts of the world, you cannot fail to be struck with the shallowness of Bering Sea; it looks like a part of the continent rather than of the ocean, and indeed it is just that, — an area of submerged continent. So in the northern Atlantic there is a lofty ridge running from France to Greenland. The British islands, the Orkney, Shetland, and Færoe groups, and Iceland are the parts of this ridge high enough to remain out of water. The remainder of it is shallow sea. Again and again it has been raised, together with the floor of the German ocean, so as to become dry land. Both before and since the time when those stone tools were dropped into the red gravel from which Mr. Cresson took them the other day, the northwestern part of Europe has been solid continent for more than a hundred miles to the west of the French and Irish coasts, the Thames and Humber have been tributaries to the Rhine, which emptied into the Arctic ocean, and across the Atlantic ridge one might have walked to the New World dryshod.[1] In similar wise the northwestern corner of America has repeatedly been joined to Siberia through the elevation of Bering Sea.

Elevation and subsidence.

There have therefore been abundant opportunities for men to get into America from the Old World without crossing salt water. Probably this was the case with the ancient inhabitants of the Delaware and Little Miami valleys; it is not at all

[1] See, for example, the map of Europe in early post-glacial times, in James Geikie's *Prehistoric Europe*

likely that men who used their kind of tools knew much about going on the sea in boats.

Whether the Indians are descended from this ancient population or not, is a question with which we have as yet no satisfactory method of dealing. It is not unlikely that these glacial men may have perished from off the face of the earth, having been crushed and supplanted by stronger races. There may have been several successive waves of migration, of which the Indians were the latest.[1] There is time enough for a great many things to happen in a thousand centuries. It will doubtless be long before all the evidence can be brought in and ransacked, but of one thing we may feel pretty sure; the past is more full of changes than we are apt to realize. Our first theories are usually too simple, and have to be enlarged and twisted into all manner of shapes in order to cover the actual complication of facts.[2]

Waves of migration.

[1] "There are three human crania in the Museum, which were found in the gravel at Trenton, one several feet below the surface, the others near the surface. These skulls, which are of remarkable uniformity, are of small size and of oval shape, differing from all other skulls in the Museum. In fact they are of a distinct type, and hence of the greatest importance. So far as they go they indicate that palæolithic man was exterminated, or has become lost by admixture with others during the many thousand years which have passed since he inhabited the Delaware valley." F. W. Putnam, "The Peabody Museum," *Proceedings of the American Antiquarian Society*, 1889, New Series, vol. vi. p. 189.

[2] An excellent example of this is the expansion and modification undergone during the past twenty years by our theories of the Aryan settlement of Europe. See Benfey's preface to Fick's *Woerterbuch der Indogermanischen Grundsprache*, 1868; Geiger, *Zur Entwickelungsgeschichte der Menschheit*, 1871; Cuno, *Forschungen im Gebiete der alten Voelkerkunde*, 1871; Schmidt, *Die Verwandtschaftsverhältnisse der Indogermanischen Sprachen*, 1872;

In this connection the history of the Eskimos introduces us to some interesting problems. Mention has been made of the River-drift men who lived in Europe during the milder intervals of the Glacial period. At such times they made their way into Germany and Britain, along with leopards, hyænas, and African elephants. But as the cold intervals came on and the edge of the polar ice-sheet crept southward and mountain glaciers filled up the valleys, these men and beasts retreated into Africa; and their place was taken by a sub-arctic race of men known as the Cave men, along with the reindeer and arctic fox and musk-sheep. More than once with the secular alternations of temperature did the River-drift men thus advance and retreat and advance again, and as they advanced the Cave men retreated, both races yielding to an enemy stronger than either, — to wit, the hostile climate. At length all traces of the River-drift men vanish, but what of the Cave men? They have left no representatives among the present populations of Europe, but the musk-sheep, which always went and came with the Cave men, is to-day found only in sub-

The Cave men of Europe in the Glacial period.

Poesche, *Die Arier*, 1878; Lindenschmit, *Handbuch der deutschen Alterthumskunde*, 1880; Penka, *Origines Ariacæ*, 1883, and *Die Herkunft der Arier*, 1886; Spiegel, *Die arische Periode und ihre Zustände*, 1887; Rendal, *Cradle of the Aryans*, 1889; Schrader, *Sprachvergleichung und Urgeschichte*, 1883, and second edition translated into English, with the title *Prehistoric Antiquities of the Aryan Peoples*, 1890. Schrader's is an epoch-making book. An attempt to defend the older and simpler views is made by Max Müller, *Biographies of Words and the Home of the Aryas*, 1888; see also Van den Gheyn, *L'origine européenne des Aryas*, 1889. The whole case is well summed up by Isaac Taylor, *Origin of the Aryans*, 1889.

arctic America among the Eskimos, and the fossilized bones of the musk-sheep lie in a regular trail across the eastern hemisphere, from the Pyrenees through Germany and Russia and all the vast length of Siberia. The stone arrow-heads, the sewing-needles, the necklaces and amulets of cut teeth, and the daggers made from antler, used by the Eskimos, resemble so minutely the implements of the Cave men, that if recent Eskimo remains were to be put into the Pleistocene caves of France and England they would be indistinguishable in appearance from the remains of the Cave men which are now found there.[1] There is another striking point of resemblance. The Eskimos have a talent for artistic sketching of men and beasts, and scenes in which men and beasts figure, which is absolutely unrivalled among rude peoples. One need but look at the sketches by common Eskimo fishermen which illustrate Dr. Henry Rink's fascinating book on Danish Greenland, to realize that this rude Eskimo art has a character as pronounced and unmistakable in its way as the much higher art of the Japanese. Now among the European remains of the Cave men are many sketches of mammoths, cave bears, and other animals now extinct, and hunting scenes so artfully and vividly portrayed as to bring distinctly before us many details of daily life in an antiquity so vast that in comparison with it the interval between the pyramids of Egypt and the Eiffel tower shrinks into a point. Such a talent is unique among savage peoples. It exists only among the living Eskimos and the ancient Cave men; and

The Eskimos are probably a remnant of the Cave men.

[1] See Dawkins, *Early Man in Britain*, pp. 233–245.

when considered in connection with so many other points of agreement, and with the indisputable fact that the Cave men were a sub-arctic race, it affords a strong presumption in favour of the opinion of that great palæontologist, Professor Boyd Dawkins, that the Eskimos of North America are to-day the sole survivors of the race that made their homes in the Pleistocene caves of western Europe.[1]

[1] According to Dr. Rink the Eskimos formerly inhabited the central portions of North America, and have retreated or been driven northward; he would make the Eskimos of Siberia an offshoot from those of America, though he freely admits that there are grounds for entertaining the opposite view. Dr. Abbott is inclined to attribute an Eskimo origin to some of the palæoliths of the Trenton gravel. On the other hand, Mr. Clements Markham derives the American Eskimos from those of Siberia. It seems to me that these views may be comprehended and reconciled in a wider one. I would suggest that during the Glacial period the ancestral Eskimos may have gradually become adapted to arctic conditions of life; that in the mild interglacial intervals they migrated northward along with the musk-sheep; and that upon the return of the cold they migrated southward again, keeping always near the edge of the ice-sheet. Such a southward migration would naturally enough bring them in one continent down to the Pyrenees, in the other down to the Alleghanies; and naturally enough the modern inquirer has his attention first directed to the indications of their final retreat, *both* northward in America and northeastward from Europe through Siberia. This is like what happened with so many plants and animals. Compare Darwin's remarks on "Dispersal in the Glacial Period," *Origin of Species*, chap. xii.

The best books on the Eskimos are those of Dr. Rink, *Tales and Traditions of the Eskimo*, Edinburgh, 1875; *Danish Greenland*, London, 1877; *The Eskimo Tribes, their Distribution and Characteristics, especially in regard to Language*, Copenhagen, 1887. See also Franz Boas, "The Central Eskimo," *Sixth Report of the Bureau of Ethnology*, Washington, 1888, pp. 399–669; W. H. Dall, *Alaska and its Resources*, 1870; Markham, "Origin and Migrations of the Greenland Esquimaux," *Journal of the Royal Geographical Society*, 1865; Cranz, *Historie von Groenland*, Leipsic,

If we have always been accustomed to think of races of men only as they are placed on modern maps, it at first seems strange to think of England and France as ever having been inhabited by Eskimos. Facts equally strange may be cited in abundance from zoölogy and botany. The camel is found to-day only in Arabia and Bactria; yet in all probability the camel originated in America,[1] and is an intruder into what we are accustomed to call his native deserts, just as the people of the United States are European intruders upon the soil of America. So the giant trees of Mariposa grove are now found only in California, but there was once a time when they were as common in Europe[2] as maple-trees to-day in a New England village.

Familiarity with innumerable facts of this sort, concerning the complicated migrations and distribution of plants and animals, has entirely altered our way of looking at the question as to the origin of the American Indians. As already observed, we can hardly be said to possess sufficient data for determining whether they are descended from the Pleistocene inhabitants of America, or have come in some later wave of migration from the Old World. Nor can we as yet determine whether

1765; Petitot, *Traditions indiennes du Canada nord-ouest*, Paris, 1886; Pilling's *Bibliography of the Eskimo Language*, Washington, 1887; Wells and Kelly, *English-Eskimo and Eskimo-English Vocabularies, with Ethnographical Memoranda concerning the Arctic Eskimos in Alaska and Siberia*, Washington, 1890; Carstensen's *Two Summers in Greenland*, London, 1890.

[1] Wallace, *Geographical Distribution of Animals*, vol. ii. p. 155.

[2] Asa Gray, "Sequoia and its History," in his *Darwiniana*, p. 205-235.

they were earlier or later comers than the Eskimos But since we have got rid of that feeling of speculative necessity above referred to, for bringing the red men from Asia within the historic period, it has become more and more clear that they have dwelt upon American soil for a very long time. The aboriginal American, as we know him, with his language and legends, his physical and mental peculiarities, his social observances and customs, is most emphatically a native and not an imported article. He belongs to the American continent as strictly as its opossums and armadillos, its maize and its golden-rod, or any members of its aboriginal fauna and flora belong to it. In all probability he came from the Old World at some ancient period, whether preglacial or post-glacial, when it was possible to come by land; and here in all probability, until the arrival of white men from Europe, he remained undisturbed by later comers, unless the Eskimos may have been such. There is not a particle of evidence to suggest any connection or intercourse between aboriginal America and Asia within any such period as the last twenty thousand years, except in so far as there may perhaps now and then have been slight surges of Eskimo tribes back and forth across Bering strait.

There was probably no connection or intercourse by water between ancient America and the Old World.

The Indians must surely be regarded as an entirely different stock from the Eskimos. On the other hand, the most competent American ethnologists are now pretty thoroughly agreed that all the aborigines south of the Eskimo region, all the way from Hudson's Bay to Cape Horn, belong

to one and the same race. It was formerly supposed that the higher culture of the Aztecs, Mayas, and Peruvians must indicate that they were of different race from the more barbarous Algonquins and Dakotas: and a speculative necessity was felt for proving that, whatever may have been the case with the other American peoples, this higher culture at any rate must have been introduced within the historic period from the Old World.[1] This feeling was caused partly by the fact that, owing to crude and loosely-framed conceptions of the real points of difference between civilization and barbarism, this Central American culture was absurdly exaggerated. As the further study of the uncivilized parts of the world has led to more accurate and precise conceptions, this kind of speculative necessity has ceased to be felt. There is an increasing disposition among scholars to agree that the warrior of Anahuac and the shepherd of the Andes were just simply Indians, and that their culture was no less indigenous than that of the Cherokees or Mohawks.

There is one great American "red" race.

To prevent any possible misconception of my meaning, a further word of explanation may be needed at this point. The word "race" is used in such widely different senses that there is apt to be more or less vagueness about it. The difference is

Different senses in which the word "race" is used.

[1] Illustrations may be found in plenty in the learned works of Brasseur de Bourbourg: — *Histoire des nations civilisées du Méxique et de l'Amérique centrale*, 4 vols., Paris, 1857–58; *Popol Vuh*, Paris, 1861; *Quatre lettres sur le Méxique*, Paris, 1868; *Le manuscrit Troano*, Paris, 1870, etc.

mainly in what logicians call extension; sometimes the word covers very little ground, sometimes a great deal. We say that the people of England, of the United States, and of New South Wales belong to one and the same race; and we say that an Englishman, a Frenchman, and a Greek belong to three different races. There is a sense in which both these statements are true. But there is also a sense in which we may say that the Englishman, the Frenchman, and the Greek belong to one and the same race; and that is when we are contrasting them as white men with black men or yellow men. Now we may correctly say that a Shawnee, an Ojibwa, and a Kickapoo belong to one and the same Algonquin race; that a Mohawk and a Tuscarora belong to one and the same Iroquois race; but that an Algonquin differs from an Iroquois somewhat as an Englishman differs from a Frenchman. No doubt we may fairly say that the Mexicans encountered by Cortes differed in race from the Iroquois encountered by Champlain, as much as an Englishman differs from an Albanian or a Montenegrin. But when we are contrasting aboriginal Americans with white men or yellow men, it is right to say that Mexicans and Iroquois belong to the same great red race.

In some parts of the world two strongly contrasted races have become mingled together, or have existed side by side for centuries without intermingling. In Europe the big blonde Aryan-speaking race has mixed with the small brunette Iberian race, producing the endless varieties in

stature and complexion which may be seen in any drawing-room in London or New York. In Africa south of Sahara, on the other hand, we find, interspersed among negro tribes but kept perfectly distinct, that primitive dwarfish race with yellow skin and tufted hair to which belong the Hottentots and Bushmen, the Wambatti lately discovered by Mr. Stanley, and other tribes.[1] Now in America south of Hudson's Bay the case seems to have been quite otherwise, and more as it would have been in Europe if there had been only Aryans, or in Africa if there had been only blacks.[2]

The belief that the people of the Cordilleras must be of radically different race from other Indians was based upon the vague notion that grades of culture have some necessary connection with likenesses and differences of race. There is no such necessary connection.[3] Between the highly civilized Japanese and their barbarous Mandshu cousins the difference in culture is much greater

No necessary connection between differences in culture and differences in race.

[1] See Werner, "The African Pygmies." *Popular Science Monthly*, September, 1890, — a thoughtful and interesting article.

[2] This sort of illustration requires continual limitation and qualification. The case in ancient America was not *quite* as it would have been in Europe if there had been only Aryans there. The semi-civilized people of the Cordilleras were relatively brachycephalous as compared with the more barbarous Indians north and east of New Mexico. It is correct to call this a distinction of race if we mean thereby a distinction developed upon American soil, a differentiation within the limits of the red race, and not an intrusion from without. In this sense the Caribs also may be regarded as a distinct sub-race; and, in the same sense, we may call the Kafirs a distinct sub-race of African blacks. See, as to the latter, Tylor, *Anthropology*, p. 39.

[3] As Sir John Lubbock well says, "Different races in similar

than the difference between Mohawks and Mexicans; and the same may be said of the people of Israel and Judah in contrast with the Arabs of the desert, or of the imperial Romans in comparison with their Teutonic kinsmen as described by Tacitus.

At this point, in order to prepare ourselves the more clearly to understand sundry facts with which we shall hereafter be obliged to deal, especially the wonderful experiences of the Spanish conquerors, it will be well to pause for a moment and do something toward defining the different grades of culture through which men have passed in attaining to the grade which can properly be called civilization. Unless we begin with clear ideas upon this head we cannot go far toward understanding the ancient America that was first visited and described for us by Spaniards. The various grades of culture need to be classified, and that most original and suggestive scholar, the late Lewis Morgan of Rochester, made a brilliant attempt in this direction, to which the reader's attention is now invited.

Grades of culture.

Below *Civilization* Mr. Morgan[1] distinguishes two principal grades or stages of culture, namely *Savagery* and *Barbarism*. There is much looseness and confusion in the popular use of these

stages of development often present more features of resemblance to one another than the same race does to itself in different stages of its history." (*Origin of Civilization*, p. 11.) If every student of history and ethnology would begin by learning this lesson, the world would be spared a vast amount of unprofitable theorizing.

[1] See his great work on *Ancient Society*, New York, 1877.

terms, and this is liable to become a fruitful source of misapprehension in the case of any statement involving either of them. When popular usage discriminates between them it discriminates in the right direction; there is a vague but not uncertain feeling that savagery is a lower stage than barbarism. But ordinarily the discrimination is not made and the two terms are carelessly employed as if interchangeable. Scientific writers long since recognized a general difference between savagery and barbarism, but Mr. Morgan was the first to suggest a really useful criterion for distinguishing between them. His criterion is the making of pottery; and his reason for selecting it is that the making of pottery is something that presupposes village life and more or less progress in the simpler arts. The earlier methods of boiling food were either putting it into holes in the ground lined with skins and then using heated stones, or else putting it into baskets coated with clay to be supported over a fire. The clay served the double purpose of preventing liquids from escaping and protecting the basket against the flame. It was probably observed that the clay was hardened by the fire, and thus in course of time it was found that the clay would answer the purpose without the basket.[1] Whoever first made this ingenious discovery led the way from savagery to barbarism. Throughout the present work

Distinction between Savagery and Barbarism.

Origin of pottery.

[1] See the evidence in Tylor, *Researches into the Early History of Mankind*, pp. 269–272; cf. Lubbock, *Prehistoric Times*, p. 573; and see Cushing's masterly "Study of Pueblo Pottery," etc., *Reports of Bureau of Ethnology*, iv., 473–521.

we shall apply the name "savages" only to uncivilized people who do not make pottery.

But within each of these two stages Mr. Morgan distinguishes three subordinate stages, or Ethnic Periods, which may be called either lower, middle, and upper status, or older, middle, and later periods. The lower status of savagery was that wholly prehistoric stage when men lived in their original restricted habitat and subsisted on fruit and nuts. To this period must be assigned the beginning of articulate speech. All existing races of men had passed beyond it at an unknown antiquity.

Lower status of savagery.

Men began to pass beyond it when they discovered how to catch fish and how to use fire. They could then begin (following coasts and rivers) to spread over the earth. The middle status of savagery, thus introduced, ends with the invention of that compound weapon, the bow and arrow. The natives of Australia, who do not know this weapon, are still in the middle status of savagery.[1]

Middle status of savagery.

The invention of the bow and arrow, which marks the upper status of savagery, was not only a great advance in military art, but it also vastly increased men's supply of food by increasing their power of killing wild game. The lowest tribes in America, such as those upon the Columbia river, the Athabaskans of Hudson's Bay, the Fuegians and some other South American tribes, are in the upper status of savagery.

Upper status of savagery.

[1] Lumholtz, *Among Cannibals*, London, 1889, gives a vivid picture of aboriginal life in Australia.

The transition from this status to the lower status of barbarism was marked, as before observed, by the invention of pottery. The end of the lower status of barbarism was marked in the Old World by the domestication of animals other than the dog, which was probably domesticated at a much earlier period as an aid to the hunter. The domestication of horses and asses, oxen and sheep, goats and pigs, marks of course an immense advance. Along with it goes considerable development of agriculture, thus enabling a small territory to support many people. It takes a wide range of country to support hunters. In the New World, except in Peru, the only domesticated animal was the dog. Horses, oxen, and the other animals mentioned did not exist in America, during the historic period, until they were brought over from Europe by the Spaniards. In ancient American society there was no such thing as a pastoral stage of development,[1] and the absence of domesticable animals from the western hemisphere may well be reckoned as very important among the causes which retarded the progress of mankind in this part of the world.

Lower status of barbarism: it ended differently in the two hemispheres.

On the other hand the ancient Americans had a cereal plant peculiar to the New World, which made comparatively small demands upon the intelligence and industry of the cultivator. Maize or "Indian corn" has played a most important

[1] The case of Peru, which forms an apparent but not real exception to this general statement, will be considered below in chap. ix.

part in the history of the New World, as regards both the red men and the white men. It could be planted without clearing or ploughing the soil. It was only necessary to girdle the trees with a stone hatchet, so as to destroy their leaves and let in the sunshine. A few scratches and digs were made in the ground with a stone digger, and the seed once dropped in took care of itself. The ears could hang for weeks after ripening, and could be picked off without meddling with the stalk; there was no need of threshing and winnowing. None of the Old World cereals can be cultivated without much more industry and intelligence. At the same time, when Indian corn is sown in tilled land it yields with little labour more than twice as much food per acre as any other kind of grain. This was of incalculable advantage to the English settlers of New England, who would have found it much harder to gain a secure foothold upon the soil if they had had to begin by preparing it for wheat and rye without the aid of the beautiful and beneficent American plant.[1] The Indians of the Atlantic coast of North America for the most part lived in stockaded villages, and cultivated their corn along with beans, pumpkins, squashes, and tobacco; but their cultivation was of the rudest sort,[2] and population was too sparse for much progress toward civiliza-

Importance of Indian corn.

[1] See Shaler, "Physiography of North America," in Winsor's *Narr. and Crit. Hist.* vol. iv. p. xiii.

[2] "No manure was used," says Mr. Parkman, speaking of the Hurons, "but at intervals of from ten to twenty years, when the soil was exhausted and firewood distant, the village was abandoned and a new one built." *Jesuits in North America*, p. xxx.

tion. But Indian corn, when sown in carefully tilled and irrigated land, had much to do with the denser population, the increasing organization of labour, and the higher development in the arts, which characterized the confederacies of Mexico and Central America and all the pueblo Indians of the southwest. The potato played a somewhat similar part in Peru. Hence it seems proper to take the regular employment of tillage with irrigation as marking the end of the lower period of barbarism in the New World. To this Mr. Morgan adds the use of adobe-brick and stone in architecture, which also distinguished the Mexicans and their neighbours from the ruder tribes of North and South America. All these ruder tribes, except the few already mentioned as in the upper period of savagery, were somewhere within the lower period of barbarism. Thus the Algonquins and Iroquois, the Creeks, the Dakotas, etc., when first seen by white men, were within this period; but some had made much further progress within it than others. For example, the Algonquin tribe of Ojibwas had little more than emerged from savagery, while the Creeks and Cherokees had made considerable advance toward the middle status of barbarism.

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Let us now observe some characteristics of this extremely interesting middle period. It began, we see, in the eastern hemisphere with the domestication of other animals than the dog, and in the western hemisphere with cultivation by irrigation and the use of adobe-brick and stone for building. It also possessed another

Middle status of barbarism.

feature which distinguished it from earlier periods, in the materials of which its tools were made. In the periods of savagery hatchets and spear-heads were made of rudely chipped stones. In the lower period of barbarism the chipping became more and more skilful until it gave place to polishing. In the middle period tools were greatly multiplied, improved polishing gave sharp and accurate points and edges, and at last metals began to be used as materials preferable to stone. In America the metal used was copper, and in some spots where it was very accessible there were instances of its use by tribes not in other respects above the lower status of barbarism, — as for example, the "mound-builders." In the Old World the metal used was the alloy of copper and tin familiarly known as bronze, and in its working it called for a higher degree of intelligence than copper.

Working of metals.

Toward the close of the middle period of barbarism the working of metals became the most important element of progress, and the period may be regarded as ending with the invention of the process of smelting iron ore. According to this principle of division, the inhabitants of the lake villages of ancient Switzerland, who kept horses and oxen, pigs and sheep, raised wheat and ground it into flour, and spun and wove linen garments, but knew nothing of iron, were in the middle status of barbarism. The same was true of the ancient Britons before they learned the use of iron from their neighbours in Gaul. In the New World the representatives of

the middle status of barbarism were such peoples as the Zuñis, the Aztecs, the Mayas, and the Peruvians.

The upper status of barbarism, in so far as it implies a knowledge of smelting iron, was never reached in aboriginal America. In the Old World it is the stage which had been reached by the Greeks of the Homeric poems [1] and the Germans in the time of Cæsar. The end

Upper status of barbarism.

[1] In the interesting architectural remains unearthed by Dr. Schliemann at Mycenæ and Tiryns, there have been found at the former place a few iron keys and knives, at the latter one iron lance-head; but the form and workmanship of these objects mark them as not older than the beginning of the fifth century B. C., or the time of the Persian wars. With these exceptions the weapons and tools found in these cities, as also in Troy, were of bronze and stone. Bronze was in common use, but obsidian knives and arrow-heads of fine workmanship abound in the ruins. According to Professor Sayce, these ruins must date from 2000 to 1700 B. C. The Greeks of that time would accordingly be placed in the middle status of barbarism. (See Schliemann's *Mycenæ*, pp. 75, 364; *Tiryns*, p. 171.) In the state of society described in the Homeric poems the smelting of iron was well known, but the process seems to have been costly, so that bronze weapons were still commonly used. (Tylor, *Anthropology*, p. 279.) The Romans of the regal period were ignorant of iron. (Lanciani, *Ancient Rome in the Light of Recent Discoveries*, Boston, 1888, pp. 39–48.) The upper period of barbarism was shortened for Greece and Rome through the circumstance that they learned the working of iron from Egypt and the use of the alphabet from Phœnicia. Such copying, of course, affects the symmetry of such schemes as Mr. Morgan's, and allowances have to be made for it. It is curious that both Greeks and Romans seem to have preserved some tradition of the Bronze Age: —

τοῖς δ' ἦν χάλκεα μὲν τεύχεα, χάλκεοι δέ τε οἶκοι,
χαλκῷ δ' εἰργάζοντο· μέλας δ' οὐκ ἔσκε σίδηρος.
Hesiod, *Opp. Di.* 134.

Arma antiqua manus ungues dentesque fuerunt
Et lapides et item silvarum fragmina rami,

of this period and the beginning of true civilization is marked by the invention of a phonetic alphabet and the production of written records. This brings within the pale of civilization such people as the ancient Phœnicians, the Hebrews after the exodus, the ruling classes at Nineveh and Babylon, the Aryans of Persia and India, and the Japanese. But clearly it will not do to insist too narrowly upon the phonetic character of the alphabet. Where people acquainted with iron have enshrined in hieroglyphics so much matter of historic record and literary interest as the Chinese and the ancient Egyptians, they too must be classed as civilized; and this Mr. Morgan by implication admits.

Beginning of civilization.

This brilliant classification of the stages of early culture will be found very helpful if we only keep in mind the fact that in all wide generalizations of this sort the case is liable to be somewhat unduly simplified. The story of human progress is really not quite so easy to decipher as such descriptions would make it appear, and when we have laid down rules of this sort we need not be surprised if we now and then come upon facts that will not exactly fit into them. In such an

> Et flamma atque ignes, postquam sunt cognita primum.
> Posterius ferri vis est, ærisque reperta.
> Et prior æris erat, quam ferri cognitus usus, etc.
>
> Lucretius, v. 1283.

Perhaps, as Munro suggests, Lucretius was thinking of Hesiod; but it does not seem improbable that in both cases there may have been a genuine tradition that their ancestors used bronze tools and weapons before iron, since the change was comparatively recent, and sundry religious observances tended to perpetuate the memory of it.

event it is best not to try to squeeze or distort the unruly facts, but to look and see if our rules will not bear some little qualification. The faculty for generalizing is a good servant but a bad master. If we observe this caution we shall find Mr. Morgan's work to be of great value. It will be observed that, with one exception, his restrictions leave the area of civilization as wide as that which we are accustomed to assign to it in our ordinary speaking and thinking. That exception is the case of Mexico, Central America, and Peru. We have so long been accustomed to gorgeous accounts of the civilization of these countries at the time of their discovery by the Spaniards that it may at first shock our preconceived notions to see them set down as in the "middle status of barbarism," one stage higher than Mohawks, and one stage lower than the warriors of the Iliad. This does indeed mark a change since Dr. Draper expressed the opinion that the Mexicans and Peruvians were morally and intellectually superior to the Europeans of the sixteenth century.[1] The reaction from the state of opinion in which such an extravagant remark was even possible has been attended with some controversy; but on the whole Mr. Morgan's main position has been steadily and rapidly gaining ground, and it is becoming more and more clear that if we are to use language correctly when we speak of the civilizations of Mexico and Peru we really mean civilizations of an extremely archaic type, considerably

"Civilizations" of Mexico and Peru.

[1] See his *Intellectual Development of Europe*, New York, 1863, pp. 448, 464.

more archaic than that of Egypt in the time of the Pharaohs. A "civilization" like that of the Aztecs, without domestic animals or iron tools, with trade still in the primitive stage of barter, with human sacrifices, and with cannibalism, has certainly some of the most vivid features of barbarism. Along with these primitive features, however, there seem to have been — after making all due allowances — some features of luxury and splendour such as we are wont to associate with civilization. The Aztecs, moreover, though doubtless a full ethnical period behind the ancient Egyptians in general advancement, had worked out a system of hieroglyphic writing, and had begun to put it to some literary use. It would seem that a people may in certain special points reach a level of attainment higher than the level which they occupy in other points. The Cave men of the Glacial period were ignorant of pottery, and thus had not risen above the upper status of savagery; but their artistic talent, upon which we have remarked, was not such as we are wont to associate with savagery. Other instances will occur to us in the proper place.

The difficulty which people usually find in realizing the true position of the ancient Mexican culture arises partly from the misconceptions which have until recently distorted the facts, and partly from the loose employment of terms above noticed.

Loose use of the words "savagery" and "civilization."

It is quite correct to speak of the Australian blackfellows as "savages," but nothing is more common than to hear the same epithet employed to characterize Shaw-

nees and Mohawks; and to call those Indians "savages" is quite misleading. So on the other hand the term "civilization" is often so loosely used as to cover a large territory belonging to "barbarism." One does not look for scientific precision in newspapers, but they are apt to reflect popular habits of thought quite faithfully, and for that reason it is proper here to quote from one. In a newspaper account of Mr. Cushing's recent discoveries of buried towns, works of irrigation, etc., in Arizona, we are first told that these are the remains of a "splendid prehistoric civilization," and the next moment we are told, in entire unconsciousness of the contradiction, that the people who constructed these works had only stone tools. Now to call a people "civilized" who have only stone tools is utterly misleading. Nothing but confusion of ideas and darkening of counsel can come from such a misuse of words. Such a people may be in a high degree interesting and entitled to credit for what they have achieved, but the grade of culture which they have reached is not "civilization."

With "savagery" thus encroaching upon its area of meaning on the one side, and "civilization" encroaching on the other, the word "barbarism," as popularly apprehended, is left in a vague and unsatisfactory plight. If we speak of Montezuma's people as barbarians one stage further advanced than Mohawks, we are liable to be charged with calling them "savages." Yet the term "barbarism" is a very useful one; indispensable, indeed, in the history of human progress. There is no other word which

Value and importance of the term "barbarism."

can serve in its stead as a designation of the enormous interval which begins with the invention of pottery and ends with the invention of the alphabet. The popular usage of the word is likely to become more definite as it comes to be more generally realized how prodigious that interval has been. When we think what a considerable portion of man's past existence has been comprised within it, and what a marvellous transformation in human knowledge and human faculty has been gradually wrought between its beginning and its end, the period of barbarism becomes invested with most thrilling interest, and its name ceases to appear otherwise than respectable. It is Mr. Morgan's chief title to fame that he has so thoroughly explored this period and described its features with such masterly skill.

It is worth while to observe that Mr. Morgan's view of the successive stages of culture is one which could not well have been marked out in all its parts except by a student of American archæology. Aboriginal America is the richest field in the world for the study of barbarism. Its people present every gradation in social life during three ethnical periods — the upper period of savagery and the lower and middle periods of barbarism — so that the process of development may be most systematically and instructively studied. Until we have become familiar with ancient American society, and so long as our view is confined to the phases of progress in the Old World, the demarcation between civilized and uncivilized life

The status of barbarism is most completely exemplified in ancient America.

seems too abrupt and sudden; we do not get a correct measure of it. The oldest European tradition reaches back only through the upper period of barbarism.[1] The middle and lower periods have lapsed into utter oblivion, and it is only modern archæological research that is beginning to recover the traces of them. But among the red men of America the social life of ages more remote than that of the lake villages of Switzerland is in many particulars preserved for us to-day, and when we study it we begin to realize as never before the continuity of human development, its enormous duration, and the almost infinite accumulation of slow efforts by which progress has been achieved. Ancient America is further instructive in presenting the middle status of barbarism in a different form from that which it assumed in the eastern hemisphere. Its most conspicuous outward manifestations, instead of tents and herds, were strange and imposing edifices of stone, so that it was quite natural that observers interpreting it from a basis of European experience should mistake it for civilization. Certain aspects of that middle period may be studied to-day in New Mexico and Arizona, as phases of the older periods may still be found among the wilder tribes, even after all the contact they have had with white men. These survivals from antiquity will not permanently outlive that contact, and it is important that no time should be lost in gathering and put-

Survivals of bygone epochs of culture.

[1] Now and then, perhaps, but very rarely, it just touches the close of the middle period, as, e. g., in the lines from Hesiod and Lucretius above quoted.

ting on record all that can be learned of the speech and arts, the customs and beliefs, everything that goes to constitute the philology and anthropology of the red men. For the intelligent and vigorous work of this sort now conducted by the Bureau of Ethnology of the Smithsonian Institution, under the direction of Major Powell, no praise can be too strong and no encouragement too hearty.

A brief enumeration of the principal groups of Indians will be helpful in enabling us to comprehend the social condition of ancient America. The groups are in great part defined by differences of language, which are perhaps a better criterion of racial affinity in the New World than in the Old, because there seems to have been little or nothing of that peculiar kind of conquest with incorporation resulting in complete change of speech which we sometimes find in the Old World; as, for example, when we see the Celto-Iberian population of Spain and the Belgic, Celtic, and Aquitanian populations of Gaul forgetting their native tongues, and adopting that of a confederacy of tribes in Latium. Except in the case of Peru there is no indication that anything of this sort went on, or that there was anything even superficially analogous to "empire," in ancient America. What strikes one most forcibly at first is the vast number of American languages. Adelung, in his "Mithridates," put the number at 1,264, and Ludewig, in his "Literature of the American Languages," put it roundly at 1,100. Squier, on the other hand, was content

Tribal society and multiplicity of languages in aboriginal America.

with 400.[1] The discrepancy arises from the fact that where one scholar sees two or three distinct languages another sees two or three dialects of one language and counts them as one; it is like the difficulty which naturalists find in agreeing as to what are species and what are only varieties. The great number of languages and dialects spoken by a sparse population is one mark of the universal prevalence of a rude and primitive form of tribal society.[2]

The lowest tribes in North America were those that are still to be found in California, in the valley of the Columbia river, and on the shores of Puget Sound. The Athabaskans of Hudson's Bay were on about the same level of savagery. They made no pottery, knew nothing of horticulture, depended for subsistence entirely upon bread-roots, fish, and game, and thus had no village life. They were mere prowlers in the upper status of savagery.[3] The Apaches of Arizona, preëminent even among red men for atrocious cruelty, are an offshoot from the Athabaskan stock. Very little better are the Shoshones and Bannocks that still wander

Tribes in the upper status of savagery.

[1] Winsor, "Bibliographical Notes on American Linguistics," in his *Narr. and Crit. Hist.*, vol. i. pp. 420–428, gives an admirable survey of the subject. See also Pilling's bibliographical bulletins of Iroquoian, Siouan, and Muskhogean languages, published by the Bureau of Ethnology.

[2] *Excursions of an Evolutionist*, pp. 147–174.

[3] For a good account of Indians in the upper status of savagery until modified by contact with civilization, see Myron Eells, "The Twana, Chemakum, and Klallam Indians of Washington Territory," *Smithsonian Report*, 1887, pp. 605–681.

among the lonely bare mountains and over the weird sage-brush plains of Idaho. The region west of the Rocky Mountains and north of New Mexico is thus the region of savagery.

Between the Rocky Mountains and the Atlantic coast the aborigines, at the time of the Discovery, might have been divided into six or seven groups, of which three were situated mainly to the east of the Mississippi river, the others mainly to the west of it. All were in the lower period of barbarism. Of the western groups, by far the most numerous were the Dakotas, comprising the Sioux, Poncas, Omahas, Iowas, Kaws, Otoes, and Missouris. From the headwaters of the Mississippi their territory extended westward on both sides of the Missouri for a thousand miles. One of their tribes, the Winnebagos, had crossed the Mississippi and pressed into the region between that river and Lake Michigan.

The Dakota family of tribes.

A second group, very small in numbers but extremely interesting to the student of ethnology, comprises the Minnitarees and Mandans on the upper Missouri.[1] The remnants of these tribes now live together in the same village, and in personal appearance, as well as in intelligence, they are described as superior to any other red men

[1] An excellent description of them, profusely illustrated with coloured pictures, may be found in Catlin's *North American Indians*, vol. i. pp. 66–207, 7th ed., London, 1848; the author was an accurate and trustworthy observer. Some writers have placed these tribes in the Dakota group because of the large number of Dakota words in their language; but these are probably borrowed words, like the numerous French words in English.

north of New Mexico. From their first discovery, by the brothers La Vérendrye in 1742, down to Mr. Catlin's visit nearly a century later, there was no change in their condition,[1] but shortly afterward, in 1838, the greater part of them were swept away by small-pox. The excellence of their horticulture, the framework of their houses, and their peculiar religious ceremonies early attracted attention. Upon Mr. Catlin they made such an impression that he fancied there must be an infusion of white blood in them, and after the fashion of those days he sought to account for it by a reference to the legend of Madoc, a Welsh prince who was dimly imagined to have sailed to America about 1170. He thought that Madoc's party might have sailed to the Mississippi and founded a colony which ascended that river and the Ohio, built the famous mounds of the Ohio valley, and finally migrated to the upper Missouri.[2] To this speculation was appended the inevitable list of words which happen to sound somewhat alike in Mandan and in Welsh. In the realm of free fancy everything is easy. That there was a Madoc who went somewhere in 1170 is quite possible, but as shrewd old John Smith said about it, "where this place was no history can show."[3] But one

The Minnitarees and Mandans.

[1] See Francis Parkman's paper, "The Discovery of the Rocky Mountains," *Atlantic Monthly*, June, 1888. I hope the appearance of this article, two years ago, indicates that we have not much longer to wait for the next of that magnificent series of volumes on the history of the French in North America.

[2] *North American Indians*, vol. ii., Appendix A.

[3] Smith's *Generall Historie of Virginia, New England and the Summer Isles*, p. 1, London, 1626.

part of Mr. Catlin's speculation may have hit somewhat nearer the truth. It is possible that the Minnitarees or the Mandans, or both, may be a remnant of some of those Mound-builders in the Mississippi valley concerning whom something will presently be said.

Pawnees, etc.

The third group in this western region consists of the Pawnees and Arickarees,[1] of the Platte valley in Nebraska, with a few kindred tribes farther to the south.

Maskoki family.

Of the three groups eastward of the Mississippi we may first mention the Maskoki, or Muskhogees, consisting of the Choctaws, Chickasaws, Seminoles, and others, with the Creek confederacy.[2] These tribes were intelligent and powerful, with a culture well advanced toward the end of the lower period of barbarism.

The Algonquin family, bordering at its southern limits upon the Maskoki, had a vast range northeasterly along the Atlantic coast until it reached the confines of Labrador, and northwesterly through the region of the Great Lakes and as far as the Churchill river[3] to the west of

[1] For the history and ethnology of these interesting tribes, see three learned papers by J. B. Dunbar, in *Magazine of American History*, vol. iv. pp. 241–281; vol. v. pp. 321–342; vol. viii. pp. 734–756; also Grinnell's *Pawnee Hero Stories and Folk-Tales*, New York, 1889.

[2] These tribes of the Gulf region were formerly grouped, along with others not akin to them, as "Mobilians." The Cherokees were supposed to belong to the Maskoki family, but they have lately been declared an intrusive offshoot from the Iroquois stock. The remnants of another alien tribe, the once famous Natchez, were adopted into the Creek confederacy. For a full account of these tribes, see Gatschet, *A Migration Legend of the Creek Indians*, vol. i., Philadelphia, 1884.

[3] Howse, *Grammar of the Cree Language*, London, 1865, p. vii.

Hudson's Bay. In other words, the Algonquins were bounded on the south by the Maskoki,[1] on the west by the Dakotas, on the northwest by the Athabaskans, on the northeast by Eskimos, and on the east by the ocean. Between Lake Superior and the Red River of the North the Crees had their hunting grounds, and closely related to them were the Pottawatomies, Ojibwas, and Ottawas. One offshoot, including the Blackfeet, Cheyennes, and Arrapahos, roamed as far west as the Rocky Mountains. The great triangle between the upper Mississippi and the Ohio was occupied by the Menomonees and Kickapoos, the Sacs and Foxes, the Miamis and Illinois, and the Shawnees. Along the coast region the principal Algonquin tribes were the Powhatans of Virginia, the Lenape or Delawares, the Munsees or Minisinks of the mountains about the Susquehanna, the Mohegans on the Hudson, the Adirondacks between that river and the St. Lawrence, the Narragansetts and their congeners in New England, and finally the Micmacs and Wabenaki far down East, as the last name implies. There is a tradition, supported to some extent by linguistic evidence,[2] that the Mohegans, with their cousins the Pequots, were more closely related to the Shawnees than to the Delaware or coast group. While all the Algonquin tribes were in the lower period of barbarism, there was a noticeable gradation among them, the Crees

Algonquin family of tribes.

[1] Except in so far as the Cherokees and Tuscaroras, presently to be mentioned, were interposed.

[2] Brinton, *The Lenape and their Legends*, p. 30.

and Ojibwas of the far North standing lowest in culture, and the Shawnees, at their southernmost limits, standing highest.

We have observed the Dakota tribes pressing eastward against their neighbours and sending out an offshoot, the Winnebagos, across the Mississippi river. It has been supposed that the Huron-Iroquois group of tribes was a more remote offshoot from the Dakotas. This is very doubtful; but in the thirteenth or fourteenth century the general trend of the Huron-Iroquois movement seems to have been eastward, either in successive swarms, or in a single swarm, which became divided and scattered by segmentation, as was common with all Indian tribes. They seem early to have proved their superiority over the Algonquins in bravery and intelligence. Their line of invasion seems to have run eastward to Niagara, and thereabouts to have bifurcated, one line following the valley of the St. Lawrence, and the other that of the Susquehanna. The Hurons established themselves in the peninsula between the lake that bears their name and Lake Ontario. South of them and along the northern shore of Lake Erie were settled their kindred, afterward called the "Neutral Nation."[1] On the southern shore the Eries planted themselves, while the Susquehannocks pushed on in a direction sufficiently described by their name. Farthest

Huron-Iroquois family of tribes.

[1] Because they refused to take part in the strife between the Hurons and the Five Nations. Their Indian name was Attiwandarons. They were unsurpassed for ferocity. See Parkman, *Jesuits in North America*, p. xliv.

of all penetrated the Tuscaroras, even into the pine forests of North Carolina, where they maintained themselves in isolation from their kindred until 1715. These invasions resulted in some displacement of Algonquin tribes, and began to sap the strength of the confederacy or alliance in which the Delawares had held a foremost place.

But by far the most famous and important of the Huron-Iroquois were those that followed the northern shore of Lake Ontario into the valley of the St. Lawrence. In that direction their progress was checked by the Algonquin tribe of Adirondacks, but they succeeded in retaining a foothold in the country for a long time; for in 1535 Jacques Cartier found on the site which he named Montreal an Iroquois village which had vanished before Champlain's arrival seventy years later. Those Iroquois who were thrust back in the struggle for the St. Lawrence valley, early in the fifteenth century, made their way across Lake Ontario and established themselves at the mouth of the Oswego river. They were then in three small tribes, — the Mohawks, Onondagas, and Senecas, — but as they grew in numbers and spread eastward to the Hudson and westward to the Genesee, the intermediate tribes of Oneidas and Cayugas were formed by segmentation.[1] About 1450 the five tribes — afterwards known as the Five Nations — were joined in a confederacy in pursuance of the wise counsel which Hayowentha, or Hiawatha,[2] according to the legend, whispered into

The Five Nations.

[1] Morgan, *Ancient Society*, p. 125.

[2] Whether there was ever such a person as Hiawatha is, to say

the ears of the Onondaga sachem, Daganoweda. This union of their resources combined, with their native bravery and cunning, and their occupation of the most commanding military position in eastern North America, to render them invincible among red men. They exterminated their old enemies the Adirondacks, and pushed the Mohegans over the mountains from the Hudson river to the Connecticut. When they first encountered white men in 1609 their name had become a terror in New England, insomuch that as soon as a single Mohawk was caught sight of by the Indians in that country, they would raise the cry from hill to hill, "A Mohawk! a Mohawk!" and forthwith would flee like sheep before wolves, never dreaming of resistance.[1]

After the Five Nations had been supplied with firearms by the Dutch their power increased with portentous rapidity.[2] At first they sought to persuade their neighbours of kindred blood and speech, the Eries and others, to join their confederacy;

the least, doubtful. As a traditional culture-hero his attributes are those of Ioskeha, Michabo, Quetzalcoatl, Viracocha, and all that class of sky-gods to which I shall again have occasion to refer. See Brinton's *Myths of the New World*, p. 172. When the Indian speaks of Hiawatha whispering advice to Daganoweda, his meaning is probably the same as that of the ancient Greek when he attributed the wisdom of some mortal hero to whispered advice from Zeus or his messenger Hermes. Longfellow's famous poem is based upon Schoolcraft's book entitled *The Hiawatha Legends*, which is really a misnomer, for the book consists chiefly of Ojibwa stories about Manabozho, son of the West Wind. There was really no such legend of Hiawatha as that which the poet has immortalized. See Hale, *The Iroquois Book of Rites*, pp. 36, 180–183.

[1] Cadwallader Colden, *History of the Five Nations*, New York, 1727.

[2] Morgan, *League of the Iroquois*, p. 12.

and failing in this they went to war and exterminated them.[1] Then they overthrew one Algonquin tribe after another until in 1690 their career was checked by the French. By that time they had reduced to a tributary condition most of the Algonquin tribes, even to the Mississippi river. Some writers have spoken of the empire of the Iroquois, and it has been surmised that, if they had not been interfered with by white men, they might have played a part analogous to that of the Romans in the Old World; but there is no real similarity between the two cases. The Romans acquired their mighty strength by incorporating vanquished peoples into their own body politic.[2] No American aborigines ever had a glimmering of the process of state-building after the Roman fashion. No incorporation resulted from the victories of the Iroquois. Where their burnings and massacres stopped short of extermination, they simply took tribute, which was as far as state-craft had got in the lower period of barbarism. General Walker has summed up their military career in a single sentence: "They were the scourge of God upon the aborigines of the continent."[3]

The six groups here enumerated — Dakota, Mandan, Pawnee, Maskoki, Algonquin, Iroquois

[1] All except the distant Tuscaroras, who in 1715 migrated from North Carolina to New York, and joining the Iroquois league made it the Six Nations. All the rest of the outlying Huron-Iroquois stock was wiped out of existence before the end of the seventeenth century, except the remnant of Hurons since known as Wyandots.

[2] See my *Beginnings of New England*, chap. i.

[3] F. A. Walker, "The Indian Question," *North American Review*, April, 1873, p. 370.

—made up the great body of the aborigines of North America who at the time of the Discovery lived in the lower status of barbarism. All made pottery of various degrees of rudeness. Their tools and weapons were of the Neolithic type,—stone either polished or accurately and artistically chipped. For the most part they lived in stockaded villages, and cultivated maize, beans, pumpkins, squashes, sunflowers, and tobacco. They depended for subsistence partly upon such vegetable products, partly upon hunting and fishing, the women generally attending to the horticulture, the men to the chase. *Horticulture* is an appropriate designation for this stage in which the ground is merely scratched with stone spades and hoes. It is incipient agriculture, but should be carefully distinguished from the *field agriculture* in which extensive pieces of land are subdued by the plough. The assistance of domestic animals is needed before such work can be carried far, and it does not appear that there was an approach to field agriculture in any part of pre-Columbian America except Peru, where men were harnessed to the plough, and perhaps occasionally llamas were used in the same way.[1] Where subsistence depended upon rude horticulture eked out by game and fish, it required a large territory to support a sparse population. The great diversity of languages contributed to maintain the isolation of tribes and prevent extensive confederation. Intertribal

Horticulture must be distinguished from field agriculture.

[1] See Humboldt, *Ansichten der Natur*, 3d ed., Stuttgart, 1849, vol. i. p. 203.

warfare was perpetual, save now and then for truces of brief duration. Warfare was attended by wholesale massacre. As many prisoners as could be managed were taken home by their captors; in some cases they were adopted into the tribe of the latter as a means of increasing its fighting strength, otherwise they were put to death with lingering torments.[1] There was nothing which afforded the red men such exquisite delight as the spectacle of live human flesh lacerated with stone knives or hissing under the touch of firebrands, and for elaborate ingenuity in devising tortures they have never been equalled.[2]

Perpetual warfare.

[1] "Women and children joined in these fiendish atrocities, and when at length the victim yielded up his life, his heart, if he were brave, was ripped from his body, cut in pieces, broiled, and given to the young men, under the belief that it would increase their courage; they drank his blood, thinking it would make them more wary; and finally his body was divided limb from limb, roasted or thrown into the seething pot, and hands and feet, arms and legs, head and trunk, were all stewed into a horrid mess and eaten amidst yells, songs, and dances." Jeffries Wyman, in *Seventh Report of Peabody Museum*, p. 37. For details of the most appalling character, see Butterfield's *History of the Girtys*, pp. 176–182; Stone's *Life of Joseph Brant*, vol. ii. pp. 31, 32; Dodge's *Plains of the Great West*, p. 418, and *Our Wild Indians*, pp. 525–529; Parkman's *Jesuits in North America*, pp. 387–391; and many other places in Parkman's writings.

[2] One often hears it said that the cruelty of the Indians was not greater than that of mediæval Europeans, as exemplified in judicial torture and in the horrors of the Inquisition. But in such a judgment there is lack of due discrimination. In the practice of torture by civil and ecclesiastical tribunals in the Middle Ages, there was a definite moral purpose which, however lamentably mistaken or perverted, gave it a very different character from torture wantonly inflicted for amusement. The atrocities formerly attendant upon the sack of towns, as e. g. Beziers, Magdeburg, etc., might more properly be regarded as an illustra-

Cannibalism was quite commonly practised.[1] The

tion of the survival of a spirit fit only for the lowest barbarism: and the Spanish conquerors of the New World themselves often exhibited cruelty such as even Indians seldom surpass. See below, vol. ii. p. 444. In spite of such cases, however, it must be held that for artistic skill in inflicting the greatest possible intensity of excruciating pain upon every nerve in the body, the Spaniard was a bungler and a novice as compared with the Indian. See Dodge's *Our Wild Indians*, pp. 536–538. Colonel Dodge was in familiar contact with Indians for more than thirty years, and writes with fairness and discrimination.

In truth the question as to comparative cruelty is not so much one of race as of occupation, except in so far as race is moulded by long occupation. The "old Adam," i. e. the inheritance from our brute ancestors, is very strong in the human race. Callousness to the suffering of others than self is part of this brute-inheritance, and under the influence of certain habits and occupations this germ of callousness may be developed to almost any height of devilish cruelty. In the lower stages of culture the lack of political aggregation on a large scale is attended with incessant warfare in the shape in which it comes home to everybody's door. This state of things keeps alive the passion of revenge and stimulates cruelty to the highest degree. As long as such a state of things endures, as it did in Europe to a limited extent throughout the Middle Ages, there is sure to be a dreadful amount of cruelty. The change in the conditions of modern warfare has been a very important factor in the rapidly increasing mildness and humanity of modern times. See my *Beginnings of New England*, pp. 226–229. Something more will be said hereafter with reference to the special causes concerned in the cruelty and brutality of the Spaniards in America. Meanwhile it may be observed in the present connection, that the Spanish taskmasters who mutilated and burned their slaves were not representative types of their own race to anything like the same extent as the Indians who tortured Brébeuf or Crawford. If the fiendish Pedrarias was a Spaniard, so too was the saintly Las Casas. The latter type would be as impossible among barbarians as an Aristotle or a Beethoven. Indeed, though there are writers who would like to prove the contrary, it may be doubted whether that type has ever attained to perfection except under the influence of Christianity.

[1] See the evidence collected by Jeffries Wyman, in *Seventh Re-*

scalps of slain enemies were always taken, and until they had attained such trophies the young men were not likely to find favour in the eyes of women. The Indian's notions of morality were those that belong to that state of society in which the tribe is the largest well-established political aggregate. Murder without the tribe was meritorious unless it entailed risk of war at an obvious disadvantage; murder within the tribe was either revenged by blood-feud or compounded by a present given to the victim's kinsmen. Such rudimentary *wergild* was often reckoned in wampum, or strings of beads made of a kind of mussel shell, and put to divers uses, as personal ornament, mnemonic record, and finally money. Religious thought was in the fetishistic or animistic stage,[1] while many tribes had risen to a vague conception of tutelar deities embodied in human or animal forms. Myth-tales abounded, and the folk-lore of the red men is found to be extremely interesting and instructive.[2] Their religion consisted mainly

port of Peabody Museum, pp. 27–37; cf. Wake, *Evolution of Morality*, vol. i. p. 243. Many illustrations are given by Mr. Parkman. In this connection it may be observed that the name "Mohawk" means "Cannibal." It is an Algonquin word, applied to this Iroquois tribe by their enemies in the Connecticut valley and about the lower Hudson. The name by which the Mohawks called themselves was "Caniengas," or "People-at-the-Flint." See Hale, *The Iroquois Book of Rites*, p. 173.

[1] For accounts and explanations of animism see Tylor's *Primitive Culture*, London, 1871, 2 vols.; Caspari, *Urgeschichte der Menschheit*, Leipsic, 1877, 2 vols.; Spencer's *Principles of Sociology*, part i.; and my *Myths and Mythmakers*, chap. vii.

[2] No time should be lost in gathering and recording every scrap of this folk-lore that can be found. The American Folk-Lore Society, founded chiefly through the exertions of my friend

in a devout belief in witchcraft. No well-defined priestly class had been evolved; the so-called "medicine men" were mere conjurers, though possessed of considerable influence.

But none of the characteristics of barbarous society above specified will carry us so far toward realizing the gulf which divides it from civilized society as the imperfect development of its domestic relations. The importance of this subject is such as to call for a few words of special elucidation.

Thirty years ago, when Sir Henry Maine published that magnificent treatise on Ancient Law, which, when considered in all its potency of suggestiveness, has perhaps done more than any other single book of our century toward placing the study of history upon a scientific basis, he began by showing that in primitive society the individual is nothing and the state nothing, while the family-group is everything, and that the progress of civilization politically has

Ancient Law.

Mr. W. W. Newell, and organized January 4, 1888, is already doing excellent work and promises to become a valuable aid, within its field, to the work of the Bureau of Ethnology. Of the *Journal of American Folk-Lore*, published for the society by Messrs. Houghton, Mifflin & Co., nine numbers have appeared, and the reader will find them full of valuable information. One may also profitably consult Knortz's *Mährchen und Sagen der nordamerikanischen Indianer*, Jena, 1871; Brinton's *Myths of the New World*, N. Y., 1868, and his *American Hero-Myths*, Phila., 1882; Leland's *Algonquin Legends of New England*, Boston, 1884; Mrs. Emerson's *Indian Myths*, Boston, 1884. Some brief reflections and criticisms of much value, in relation to aboriginal American folk-lore, may be found in Curtin's *Myths and Folk-Lore of Ireland*, pp. 12–27.

consisted on the one hand in the aggregation and building up of family-groups through intermediate tribal organizations into states, and on the other hand in the disentanglement of individuals from the family thraldom. In other words, we began by having no political communities larger than clans, and no bond of political union except blood relationship, and in this state of things the individual, as to his rights and obligations, was submerged in the clan. We at length come to have great nations like the English or the French, in which blood-relationship as a bond of political union is no longer indispensable or even much thought of, and in which the individual citizen is the possessor of legal rights and subject to legal obligations. No one in our time can forget how beautifully Sir Henry Maine, with his profound knowledge of early Aryan law and custom, from Ireland to Hindustan, delineated the slow growth of individual ownership of property and individual responsibility for delict and crime out of an earlier stage in which ownership and responsibility belonged only to family-groups or clans.

In all these brilliant studies Sir Henry Maine started with the patriarchal family as we find it at the dawn of history among all peoples of Aryan and Semitic speech, — the patriarchal family of the ancient Roman and the ancient Jew, the family in which kinship is reckoned through males, and in which all authority centres in the eldest male, and descends to his eldest son. Maine treated this patriarchal family as primitive; but his great book had hardly

The patriarchal family not primitive.

appeared when other scholars, more familiar than he with races in savagery or in the lower status of barbarism, showed that his view was too restricted. We do not get back to primitive society by studying Greeks, Romans, and Jews, peoples who had nearly emerged from the later period of barbarism when we first know them.[1] Their patriarchal family was perfected in shape during the later period of barbarism, and it was preceded by a much ruder and less definite form of family-group in which kinship was reckoned only through the mother, and the headship never descended from father to son. As so often happens, this discovery was made almost simultaneously by two investigators, each working in ignorance of what the other was doing. In 1861, the same year in which "Ancient Law" was published, Professor Bachofen, of Basel, published his famous book, "Das Mutterrecht," of which his co-discoverer and rival, after taking exception to some of his statements, thus cordially writes: "It remains, how-

"Mother-right."

[1] Until lately our acquaintance with human history was derived almost exclusively from literary memorials, among which the Bible, the Homeric poems, and the Vedas, carried us back about as far as literature could take us. It was natural, therefore, to suppose that the society of the times of Abraham or Agamemnon was "primitive," and the wisest scholars reasoned upon such an assumption. With vision thus restricted to civilized man and his ideas and works, people felt free to speculate about uncivilized races (generally grouped together indiscriminately as "savages") according to any *à priori* whim that might happen to captivate their fancy. But the discoveries of the last half-century have opened such stupendous vistas of the past that the age of Abraham seems but as yesterday. The state of society described in the book of Genesis had five entire ethnical periods, and the greater part of a sixth, behind it; and its institutions were, comparatively speaking, modern.

ever, after all qualifications and deductions, that Bachofen, before any one else, discovered the fact that a system of kinship through mothers only, had anciently everywhere prevailed before the tie of blood between father and child had found a place in systems of relationships. And the honour of that discovery, the importance of which, as affording a new starting-point for all history, cannot be overestimated, must without stint or qualification be assigned to him." [1] Such are the generous words of the late John Ferguson McLennan, who had no knowledge of Bachofen's work when his own treatise on "Primitive Marriage" was published in 1865. Since he was so modest in urging his own claims, it is due to the Scotch lawyer's memory to say that, while he was inferior in point of erudition to the Swiss professor, his book is characterized by greater sagacity, goes more directly to the mark, and is less encumbered by visionary speculations of doubtful value.[2] Mr. McLennan proved, from evidence collected chiefly from Australians and South Sea Islanders, and sundry non-Aryan tribes of Hindustan and Thibet, that systems of kinship in which the father is ignored exist to-day, and he furthermore discovered unmistakable and very significant traces of the former existence of such a state of things among the Mongols, the Greeks and Phœnicians, and the ancient Hebrews. By those who were inclined to

Primitive marriage.

[1] McLennan's *Studies in Ancient History, comprising a reprint of Primitive Marriage*, etc. London, 1876, p. 421.

[2] There is much that is unsound in it, however, as is often inevitably the case with books that strike boldly into a new field of inquiry.

regard Sir Henry Maine's views as final, it was argued that Mr. McLennan's facts were of a sporadic and exceptional character. But when the evidence from this vast archaic world of America began to be gathered in and interpreted by Mr. Morgan, this argument fell to the ground, and as to the point chiefly in contention, Mr. McLennan was proved to be right. Throughout aboriginal America, with one or two exceptions, kinship was reckoned through females only, and in the exceptional instances the vestiges of that system were so prominent as to make it clear that the change had been but recently effected. During the past fifteen years, evidence has accumulated from various parts of the world, until it is beginning to appear as if it were the patriarchal system that is exceptional, having been reached only by the highest races.[1] Sir Henry Maine's work has lost none of

The system of reckoning kinship through females only.

[1] A general view of the subject may be obtained from the following works: Bachofen, *Das Mutterrecht*, Stuttgart, 1871, and *Die Sage von Tanaquil*, Heidelberg, 1870; McLennan's *Studies in Ancient History*, London, 1876, and *The Patriarchal Theory*, London, 1884; Morgan's *Systems of Consanguinity* (Smithsonian Contributions to Knowledge, vol. xvii.), Washington, 1871, and *Ancient Society*, New York, 1877; Robertson Smith, *Kinship and Marriage in Early Arabia*, Cambridge, Eng., 1885; Lubbock, *Origin of Civilization*, 5th ed., London, 1889; Giraud-Teulon, *La Mère chez certains peuples de l'antiquité*, Paris, 1867, and *Les Origines de la Famille*, Geneva, 1874; Starcke (of Copenhagen), *The Primitive Family*, London, 1889. Some criticisms upon McLennan and Morgan may be found in Maine's later works, *Early History of Institutions*, London, 1875, and *Early Law and Custom*, London, 1883. By far the ablest critical survey of the whole field is that in Spencer's *Principles of Sociology*, vol. i. pp. 621-797.

its value, only, like all human work, it is not final; it needs to be supplemented by the further study of savagery as best exemplified in Australia and some parts of Polynesia, and of barbarism as best exemplified in America. The subject is, moreover, one of great and complicated difficulty, and leads incidentally to many questions for solving which the data at our command are still inadequate. It is enough for us now to observe in general that while there are plenty of instances of change from the system of reckoning kinship only through females, to the system of reckoning through males, there do not appear to have been any instances of change in the reverse direction; and that in ancient America the earlier system was prevalent.

If now we ask the reason for such a system of reckoning kinship and inheritance, so strange according to all our modern notions, the true answer doubtless is that which was given by prudent (πεπνυμένος) Telemachus to the goddess Athene when she asked him to tell her truly if he was the son of Odysseus: — "My mother says I am his son, for my part, I don't know; one never knows of one's self who one's father is."[1] Already, no doubt, in Homer's time

Original reason for the system.

[1] Ἀλλ' ἄγε μοι τόδε εἰπὲ καὶ ἀτρεκέως κατάλεξον,
εἰ δὴ ἐξ αὐτοῖο τόσος παῖς εἶς Ὀδυσῆος.
αἰνῶς γὰρ κεφαλήν τε καὶ ὄμματα καλὰ ἔοικας
κείνῳ, ἐπεὶ θαμὰ τοῖον ἐμισγόμεθ' ἀλλήλοισιν,
πρίν γε τὸν ἐς Τροίην ἀναβήμεναι, ἔνθα περ ἄλλοι
Ἀργείων οἱ ἄριστοι ἔβαν κοίλῃς ἐπὶ νηυσίν·
ἐκ τοῦ δ' οὔτ' Ὀδυσῆα ἐγὼν ἴδον οὔτ' ἐμὲ κεῖνος.
Τὴν δ' αὖ Τηλέμαχος πεπνυμένος ἀντίον ηὔδα

there was a gleam of satire about this answer, such as it would show on a modern page; but in more primitive times it was a very serious affair. From what we know of the ideas and practices of uncivilized tribes all over the world, it is evident that the sacredness of the family based upon indissoluble marriage is a thing of comparatively modern growth. If the sexual relations of the Australians, as observed to-day,[1] are an improvement upon an antecedent state of things, that antecedent state must have been sheer promiscuity. There is ample warrant for supposing, with Mr. McLennan, that at the beginning of the lower status of savagery, long since everywhere extinct, the family had not made itself distinctly visible, but men lived in a horde very much like gregarious brutes.[2] I have shown that

The primeval human horde.

> τοιγὰρ ἐγώ τοι, ξεῖνε, μάλ' ἀτρεκέως ἀγορεύσω.
> μήτηρ μέν τ' ἐμέ φησι τοῦ ἔμμεναι, αὐτὰρ ἔγωγε
> οὐκ οἶδ'· οὐ γάρ πώ τις ἓν γόνον αὐτὸς ἀνέγνω.
>
> *Odyssey*, i. 206.

[1] Lumholtz, *Among Cannibals*, p. 213; Lubbock, *Origin of Civilization*, p. 107; Morgan, *Ancient Society*, part iii., chap. iii. "After battle it frequently happens among the native tribes of Australia that the wives of the conquered, of their own free-will, go over to the victors; reminding us of the lioness which, quietly watching the fight between two lions, goes off with the conqueror." Spencer, *Principles of Sociology*, vol. i. p. 632.

[2] The notion of the descent of the human race from a single "pair," or of different races from different "pairs," is a curious instance of transferring modern institutions into times primeval. Of course the idea is absurd. When the elder Agassiz so emphatically declared that "pines have originated in forests, heaths in heaths, grasses in prairies, bees in hives, herrings in shoals, buffaloes in herds, men in nations" (*Essay on Classification*, London, 1859, p. 58), he made, indeed, a mistake of the same sort,

the essential difference between this primeval human horde and a mere herd of brutes consisted in the fact that the gradual but very great prolongation of infancy had produced two effects: the lengthening of the care of children tended to differentiate the horde into family-groups, and the lengthening of the period of youthful mental plasticity made it more possible for a new generation to improve upon the ideas and customs of its predecessors.[1] In these two concomitant processes — the development of the family and the increase of mental plasticity, or ability to adopt new methods and strike out into new paths of thought — lies the whole explanation of the moral and intellectual superiority of men over dumb animals. But in each case the change was very gradual.[2] The true savage is only a little less unteachable than the beasts of the field. The savage family is at first barely discernible amid the primitive social chaos

so far as concerns the origin of Man, for the nation is a still more modern institution than the family; but in the other items of his statement he was right, and as regards the human race he was thinking in the right direction when he placed *multitude* instead of *duality* at the beginning. If instead of that extremely complex and highly organized multitude called "nation" (in the plural), he had started with the extremely simple and almost unorganized multitude called "horde" (in the singular), the statement for Man would have been correct. Such views were hardly within the reach of science thirty years ago.

[1] *Outlines of Cosmic Philosophy*, part ii., chaps. xvi., xxi., xxii.; *Excursions of an Evolutionist*, pp. 306–319; *Darwinism, and other Essays*, pp. 40–49; *The Destiny of Man*, §§ iii.–ix.

[2] The slowness of the development has apparently been such as befits the transcendent value of the result. Though the question is confessedly beyond the reach of science, may we not hold that civilized man, the creature of an infinite past, is the child of eternity, maturing for an inheritance of immortal life?

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in which it had its origin. Along with polyandry and polygyny in various degrees and forms, instances of exclusive pairing, of at least a temporary character, are to be found among the lowest existing savages, and there are reasons for supposing that such may have been the case even in primeval times. But it was impossible for strict monogamy to flourish in the ruder stages of social development; and the kind of family-group that was first clearly and permanently differentiated from the primeval horde was not at all like what civilized people would recognize as a family. It was the *gens* or *clan*, as we find it exemplified in all stages from the middle period of savagery to the middle period of barbarism. The *gens* or *clan* was simply — to define it by a third synonym — the *kin;* it was originally a group of males and females who were traditionally aware of their common descent reckoned in the female line. At this stage of development there was quite generally though not universally prevalent the custom of "exogamy," by which a man was forbidden to marry a woman of his own clan. Among such Australian tribes as have been studied, this primitive restriction upon promiscuity seems to be about the only one.

Earliest family-group: the clan.

"Exogamy."

Throughout all the earlier stages of culture, and even into the civilized period, we find society organized with the clan for its ultimate unit, although in course of time its character becomes greatly altered by the substitution of kinship in the paternal, for that in the maternal line. By

long-continued growth and repeated segmentation the primitive clan was developed into a more complex structure, in which a group of clans constituted a *phratry* or brotherhood, and a group of phratries constituted a *tribe*. This threefold grouping is found so commonly in all parts of the world as to afford good ground for the belief that it has been universal. It was long ago familiar to historians in the case of Greece and Rome, and of our Teutonic forefathers,[1] but it also existed generally in ancient America, and many obscure points connected with the history of the Greek and Roman groups have been elucidated through the study of Iroquois and Algonquin institutions. Along with the likenesses, however, there are numerous unlikenesses, due to the change of kinship, among the European groups, from the female line to the male.

Phratry and tribe.

This change, as it occurred among Aryan and Semitic peoples, marked one of the most momentous revolutions in the history of mankind. It probably occurred early in the upper period of barbarism, or late in the middle period, after the long-continued domestication of animals had resulted in the acquisition of private property (*pecus*, *peculium*, *pecunia*) in large amounts by individuals. In primitive society there was very little personal property except in weapons, clothing (such as it was), and trinkets. Real estate was unknown. Land was simply *occupied* by the tribe. There was general communism and social equal-

Effect of pastoral life upon property and upon the family.

[1] The Teutonic *hundred* and Roman *curia* answered to the Greek *phratry*.

ity. In the Old World the earliest instance of extensive "adverse possession" on the part of individuals, as against other individuals in the clan-community, was the possession of flocks and herds. Distinctions in wealth and rank were thus inaugurated; slavery began to be profitable and personal retainers and adherents useful in new ways. As in earlier stages the community in marital relations had been part of the general community in possessions, so now the exclusive possession of a wife or wives was part of the system of private property that was coming into vogue. The man of many cattle, the man who could attach subordinates to him through motives of self-interest as well as personal deference, the man who could defend his property against robbers, could also have his separate household and maintain its sanctity. In this way, it is believed, indissoluble marriage, in its two forms of monogamy and polygamy, originated. That it had already existed sporadically is not denied, but it now acquired such stability and permanence that the older and looser forms of alliance, hitherto prevalent, fell into disfavour. A natural result of the growth of private wealth and the permanence of the marital relation was the change in reckoning kinship from the maternal to the paternal line. This change was probably favoured by the prevalence of polygamy among those who were coming to be distinguished as "upper classes," since a large family of children by different mothers could be held together only by reckoning the kinship through the father. Thus, we may suppose, originated the patriarchal

family. Even in its rudest form it was an immense improvement upon what had gone before, and to the stronger and higher social organization thus acquired we must largely ascribe the rise of the Aryan and Semitic peoples to the foremost rank of civilization.[1]

It is not intended to imply that there is no other way in which the change to the male line may have been brought about among other peoples. The explanation just given applies very well to the Aryan and Semitic peoples, but it is inapplicable to the state of things which seems to have existed in Mexico at the time of the Discovery.[2] The subject is a difficult one, and sometimes confronts us with questions much easier to ask than to answer. The change has been observed among tribes in a lower stage than that just described.[3] On the other hand, as old customs die hard, no doubt inheritance has in many places continued in the maternal line long after paternity is fully known. Symmetrical regularity in the development of human institutions has by no means been the rule, and there is often much difficulty in explaining particular cases, even when the direction of the general drift can be discerned.

[1] Fenton's *Early Hebrew Life*, London, 1880, is an interesting study of the upper period of barbarism; see also Spencer, *Princip. of Sociol.*, i. 724–737.

[2] See below, p. 122.

[3] As among the Hervey Islanders; Gill, *Myths and Songs of the South Pacific*, p. 36. Sir John Lubbock would account for the curious and widely spread custom of the *Couvade* as a feature of this change. *Origin of Civilization*, pp. 14–17, 159; cf. Tylor, *Early Hist. of Mankind*, pp. 288, 297.

In aboriginal America, as already observed, kinship through females only was the rule, and exogamy was strictly enforced, — the wife must be taken from a different clan. Indissoluble marriage, whether monogamous or polygamous, seems to have been unknown. The marriage relation was terminable at the will of either party.[1] The abiding unit upon which the social structure was founded was not the family but the exogamous clan.

The exogamous clan in ancient America.

I have been at some pains to elucidate this point because the house-life of the American aborigines found visible, and in some instances very durable, expression in a remarkable style of house-architecture. The manner in which the Indians built their houses grew directly out of the requirements of their life. It was an unmistakably characteristic architecture, and while it ex-

[1] "There is no embarrassment growing out of problems respecting the woman's future support, the division of property, or the adjustment of claims for the possession of the children. The independent self-support of every adult healthy Indian, male or female, and the gentile relationship, which is more wide-reaching and authoritative than that of marriage, have already disposed of these questions, which are usually so perplexing for the white man. So far as personal maintenance is concerned, a woman is, as a rule, just as well off without a husband as with one. What is hers, in the shape of property, remains her own whether she is married or not. In fact, marriage among these Indians seems to be but the natural mating of the sexes, to cease at the option of either of the interested parties." Clay MacCauley, "The Seminole Indians of Florida," in *Fifth Annual Report of the Bureau of Ethnology*, Washington, 1887, p. 497. For a graphic account of the state of things among the Cheyennes and Arrapahos, see Dodge, *Our Wild Indians*, pp. 204–220.

hibits manifold unlikenesses in detail, due to differences in intelligence as well as to the presence or absence of sundry materials, there is one underlying principle always manifest. That underlying principle is adaptation to a certain mode of communal living such as all American aborigines that have been carefully studied are known to have practised. Through many gradations, from the sty of the California savage up to the noble sculptured ruins of Uxmal and Chichen-Itza, the principle is always present. Taken in connection with evidence from other sources, it enables us to exhibit a gradation of stages of culture in aboriginal North America, with the savages of the Sacramento and Columbia valleys at the bottom, and the Mayas of Yucatan at the top; and while in going from one end to the other a very long interval was traversed, we feel that the progress of the aborigines in crossing that interval was made along similar lines.[1]

Intimate connection of aboriginal architecture with social life.

The principle was first studied and explained by Mr. Morgan in the case of the famous "long houses" of the Iroquois. "The long house . . . was from fifty to eighty and sometimes one hundred feet long. It consisted of a strong frame of upright poles set in the ground, which was strengthened with horizontal poles attached with withes, and surmounted with a triangular, and in some cases with a round roof. It was covered over,

[1] See Morgan's *Houses and House-Life of the American Aborigines*, Washington, 1881, an epoch-making book of rare and absorbing interest.

both sides and roof, with long strips of elm bark tied to the frame with strings or splints. An ex-

Seneca-Iroquois long house.

ternal frame of poles for the sides and of rafters for the roof were then adjusted to hold the bark shingles between them, the two frames being tied together. The interior of the house was comparted [1] at intervals

The long houses of the Iroquois.

Ground-plan of long house.

of six or eight feet, leaving each chamber entirely open like a stall upon the passageway which passed through the centre of the house from end to end. At each end was a doorway covered with suspended skins. Between each four apartments, two on a side, was a fire-pit in the centre of the hall, used in common by their occupants. Thus a house with five fires would contain twenty apart-

[1] This verb of Mr. Morgan's at first struck me as odd, but though rarely used, it is supported by good authority; see *Century Dictionary*, s. v.

ments and accommodate twenty families, unless some apartments were reserved for storage. They were warm, roomy, and tidily-kept habitations. Raised bunks were constructed around the walls of each apartment for beds. From the roof-poles were suspended their strings of corn in the ear, braided by the husks, also strings of dried squashes and pumpkins. Spaces were contrived here and there to store away their accumulations of provisions. Each house, as a rule, was occupied by related families, the mothers and their children belonging to the same gens, while their husbands and the fathers of these children belonged to other gentes; consequently the gens or clan of the mother largely predominated in the household. Whatever was taken in the hunt or raised by cultivation by any member of the household . . . was for the common benefit. Provisions were made a common stock within the household." [1]

"Over every such household a matron presided, whose duty it was to supervise its domestic economy. After the single daily meal had been cooked at the different fires within the house, it was her province to divide the food from the kettle to the several families according to their respective needs. What remained was placed in the custody of another person until she again required it." [2]

[1] The Iroquois ceased to build such houses before the beginning of the present century. I quote Mr. Morgan's description at length, because his book is out of print and hard to obtain. It ought to be republished, and in octavo, like his *Ancient Society*, of which it is a continuation.

[2] Lucien Carr, "On the Social and Political Position of Woman among the Huron-Iroquois Tribes," *Reports of Peabody Museum*, vol. iii. p. 215.

Not only the food was common property, but many chattels, including the children, belonged to the gens or clan. When a young woman got married she brought her husband home with her. Though thenceforth an inmate of this household he remained an alien to her clan. "If he proved lazy and failed to do his share of the providing, woe be to him. No matter how many children, or whatever goods he might have in the house, he might at any time be ordered to pick up his blanket and budge; and after such orders it would not be healthful for him to disobey; the house would be too hot for him; and unless saved by the intercession of some aunt or grandmother [of his wife] he must retreat to his own clan, or, as was often done, go and start a new matrimonial alliance in some other. . . . The female portion ruled the house."[1]

Summary divorce.

Though there was but one freshly-cooked meal, taken about the middle of the day, any member of the household when hungry could be helped from the common stock. Hospitality was universal. If a person from one of the other communal households, or a stranger from another tribe (in time of peace), were to visit the house, the women would immediately offer him food, and it was a breach of etiquette to decline to eat it. This custom was strictly observed all over the continent and in the West India Islands, and was often remarked upon by the early discoverers, in

Hospitality.

[1] This was not incompatible with the subjection of women to extreme drudgery and ill-treatment. For an instructive comparison with the case among the tribes of the Far West, see Dodge, *Our Wild Indians*, chap. xvi.

whose minds it was apt to implant idyllic notions that were afterward rudely disturbed. The prevalence of hospitality among uncivilized races has long been noted by travellers, and is probably in most cases, as it certainly was in ancient America, closely connected with communism in living.

The clan, which practised this communism, had its definite organization, officers, rights, and duties. Its official head was the "sachem," whose functions were of a civil nature. The sachem was elected by the clan and must be a member of it, so that a son could not be chosen to succeed his father, but a sachem could be succeeded by his uterine brother or by his sister's son, and in this way customary lines of succession could and often did tend to become established. The clan also elected its "chiefs," whose functions were military; the number of chiefs was proportionate to that of the people composing the clan, usually one chief to every fifty or sixty persons. The clan could depose its sachem or any of its chiefs. Personal property, such as weapons, or trophies, or rights of user in the garden-plots, was inheritable in the female line, and thus stayed within the clan. The members were reciprocally bound to help, defend, and avenge one another. The clan had the right of adopting strangers to strengthen itself. It had the right of naming its members, and these names were always obviously significant, like Little Turtle, Yellow Wolf, etc.; of names like our Richard or William, with the meaning lost, or obvious only to scholars, no trace is to be found in aboriginal America. The clan

Structure of the clan.

itself, too, always had a name, which was usually that of some animal, — as Wolf, Eagle, or Salmon, and a rude drawing or pictograph of the creature served as a "totem" or primitive heraldic device. A mythological meaning was attached to this emblem. The clan had its own common religious rites and common burial place. There was a clan-council, of which women might be members; there were instances, indeed, of its being composed entirely of women, whose position was one of much more dignity and influence than has commonly been supposed. Instances of squaw sachems were not so very rare.[1]

The number of clans in a tribe naturally bore some proportion to the populousness of the tribe, varying from three, in the case of the Delawares, to twenty or more, as in the case of the Ojibwas and Creeks. There were usually eight or ten, and these were usually grouped into two or three phratries. The phratry seems to have originated in the segmentation of the overgrown clan, for in some cases exogamy was originally practised as between the phratries and afterward the custom died out while it was retained as between their constituent clans.[2] The

Origin and structure of the phratry.

[1] Among the Wyandots there is in each clan a council composed of four squaws, and this council elects the male sachem who is its head. Therefore the tribal council, which is the aggregate of the clan-councils, consists one fifth of men and four fifths of women. See Powell, "Wyandot Government: a Short Study of Tribal Society," in *First Annual Report of the Bureau of Ethnology*, Washington, 1881, pp. 59–69; and also Mr. Carr's interesting essay above cited.

[2] H. H. Bancroft, *Native Races of the Pacific States*, vol. i. p. 109.

system of naming often indicates this origin of the phratry, though seldom quite so forcibly as in the case of the Mohegan tribe, which was thus composed:[1] —

I. Wolf Phratry.

Clans: 1. Wolf, 2. Bear, 3. Dog, 4. Opossum.

II. Turtle Phratry.

Clans: 5. Little Turtle, 6. Mud Turtle, 7. Great Turtle, 8. Yellow Eel.

III. Turkey Phratry.

Clans: 9. Turkey, 10. Crane, 11. Chicken.

Here the senior clan in the phratry tends to keep the original clan-name, while the junior clans have been guided by a sense of kinship in choosing their new names. This origin of the phratry is further indicated by the fact that the phratry does not always occur; sometimes the clans are organized directly into the tribe. The phratry was not so much a governmental as a religious and social organization. Its most important function seems to have been supplementing or reinforcing the action of the single clan in exacting compensation for murder; and this point is full of interest because it helps us to understand how among our Teutonic forefathers the "hundred" (the equivalent of the phratry) became charged with the duty of prosecuting criminals. The Greek phratry had a precisely analogous function.[2]

[1] Morgan, *Houses and House-Life*, p. 16.

[2] See Freeman, *Comparative Politics*, p. 117; Stubbs, *Const.*

The Indian tribe was a group of people distinguished by the exclusive possession of a dialect in common. It possessed a tribal name and occupied a more or less clearly defined territory; there were also tribal religious rites. Its supreme government was vested in the council of its clan-chiefs and sachems; and as these were thus officers of the tribe as well as of the clan, the tribe exercised the right of investing them with office, amid appropriate solemnities, after their election by their respective clans. The tribal-council had also the right to depose chiefs and sachems. In some instances, not always, there was a head chief or military commander for the tribes, elected by the tribal council. Such was the origin of the office which, in most societies of the Old World, gradually multiplied its functions and accumulated power until it developed into true kingship. Nowhere in ancient North America did it quite reach such a stage.

Structure of the tribe.

Among the greater part of the aborigines no higher form of social structure was attained than the tribe. There were, however, several instances of permanent confederation, of which the two most interesting and most highly developed were the League of the Iroquois, mentioned above, and the Mexican Confederacy, presently to be considered. The principles upon which the Iroquois league

Cross-relationships between clans and tribes: the Iroquois Confederacy.

Hist., vol. i. pp. 98–104; Grote, *History of Greece*, vol. iii. pp. 74, 88. It is interesting to compare Grote's description with Morgan's (*Anc. Soc.*, pp. 71, 94) and note both the closeness of the general parallelism and the character of the specific variations.

was founded have been thoroughly and minutely explained by Mr. Morgan.[1] It originated in a union of five tribes composed of clans in common, and speaking five dialects of a common language. These tribes had themselves arisen through the segmentation of a single overgrown tribe, so that portions of the original clans survived in them all. The Wolf, Bear, and Turtle clan were common to all the five tribes; three other clans were common to three of the five. "All the members of the same gens [clan], whether Mohawks, Oneidas, Onondagas, Cayugas, or Senecas, were brothers and sisters to each other in virtue of their descent from the same common [female] ancestor, and they recognized each other as such with the fullest cordiality. When they met, the first inquiry was the name of each other's gens, and next the immediate pedigree of each other's sachems; after which they were able to find, under their peculiar system of consanguinity, the relationship in which they stood to each other. . . . This cross-relationship between persons of the same gens in the different tribes is still preserved and recognized among them in all its original force. It explains the tenacity with which the fragments of the old confederacy still cling together."[2] Acknowledged

[1] In his *League of the Iroquois*, Rochester, 1851, a book now out of print and excessively rare. A brief summary is given in his *Ancient Society*, chap. v., and in his *Houses and House-Life*, pp. 23–41. Mr. Morgan was adopted into the Seneca tribe, and his life work was begun by a profound and exhaustive study of this interesting people.

[2] *Houses and House-Life*, p. 33. At the period of its greatest power, about 1675, the people of the confederacy were about 25,000 in number. In 1875, according to official statistics (see

consanguinity is to the barbarian a sound reason, and the only one conceivable, for permanent political union; and the very existence of such a confederacy as that of the Five Nations was rendered possible only through the permanence of the clans or communal households which were its ultimate units. We have here a clue to the policy of these Indians toward the kindred tribes who refused to join their league. These tribes, too, so far as is known, would seem to have contained the same clans. After a separation of at least four hundred years the Wyandots have still five of their eight clans in common with the Iroquois. When the Eries and other tribes would not join the league of their kindred, the refusal smacked of treason to the kin, and we can quite understand the deadly fury with which the latter turned upon them and butchered every man, woman, and child except such as they saw fit to adopt into their own clans.

table appended to Dodge's *Plains of the Great West*, pp. 441–448), there were in the state of New York 198 Oneidas, 203 Onondagas, 165 Cayugas, 3,043 Senecas, and 448 Tuscaroras, — in all 4,057. Besides these there were 1,279 Oneidas on a reservation in Wisconsin, and 207 Senecas in the Indian Territory. The Mohawks are not mentioned in the list. During the Revolutionary War, and just afterward, the Mohawks migrated into Upper Canada (Ontario), for an account of which the reader may consult the second volume of Stone's *Life of Brant*. Portions of the other tribes also went to Canada. In New York the Oneidas and Tuscaroras were converted to Christianity by Samuel Kirkland and withheld from alliance with the British during the Revolution; the others still retain their ancient religion. They are for the most part farmers and are now increasing in numbers. Their treatment by the state of New York has been honourably distinguished for justice and humanity.

Each of the Five Tribes retained its local self-government. The supreme government of the confederacy was vested in a General Council of fifty sachems, "equal in rank and authority." The fifty sachemships were created in perpetuity in certain clans of the several tribes; whenever a vacancy occurred, it was filled by the clan electing one of its own members; a sachem once thus elected could be deposed by the clan-council for good cause; "but the right to invest these sachems with office was reserved to the General Council." These fifty sachems of the confederacy were likewise sachems in their respective tribes, "and with the chiefs of these tribes formed the council of each, which was supreme over all matters pertaining to the tribe exclusively." The General Council could not convene itself, but could be convened by any one of the five tribal councils. The regular meeting was once a year in the autumn, in the valley of Onondaga, but in stirring times extra sessions were frequent. The proceedings were opened by an address from one of the sachems, "in the course of which he thanked the Great Spirit [i. e. Ioskeha, the sky-god] for sparing their lives and permitting them to meet together;" after this they were ready for business. It was proper for any orator from among the people to address the Council with arguments, and the debates were sometimes very long and elaborate. When it came to voting, the fifty sachems voted by tribes, each tribe counting as a unit, and unanimity was as imperative as in an English jury, so that one tribe could

Structure of the confederacy.

block the proceedings. The confederacy had no head-sachem, or civil chief-magistrate; but a military commander was indispensable, and, curiously enough, without being taught by the experience of a Tarquin, the Iroquois made this a dual office, like the Roman consulship. There were two permanent chieftainships, one in the Wolf, the other in the Turtle clan, and both in the Seneca tribe, because the western border was the most exposed to attack.[1] The chiefs were elected by the clan, and inducted into office by the General Council; their tenure was during life or good behaviour. This office never encroached upon the others in its powers, but an able warrior in this position could wield great influence.

The "Long House."

Such was the famous confederacy of the Iroquois. They called it the Long House, and by this name as commonly as any other it is known in history. The name by which they called themselves was Hodenosaunee, or "People of the Long House." The name was picturesquely descriptive of the long and narrow strip of villages with its western outlook toward the Niagara, and its eastern toward the Hudson, three hundred miles distant. But it was appropriate also for another and a deeper reason than this. We have seen that in its social and political

[1] Somewhat on the same principle that in mediæval Europe led an earl or count, commanding an exposed border district or *march* to rise in power and importance and become a "margrave" [*mark* + *graf* = march-count] or "marquis." Compare the increase of sovereignty accorded to the earls of Chester and bishops of Durham as rulers of the two principal march counties of England.

structure, from top to bottom and from end to end, the confederacy was based upon and held together by the gentes, clans, communal households, or "long houses," which were its component units. They may be compared to the hypothetical indestructible atoms of modern physics, whereof all material objects are composed. The whole institutional fabric was the outgrowth of the group of ideas and habits that belong to a state of society ignorant of and incapable of imagining any other form of organization than the clan held together by the tie of a common maternal ancestry. The house architecture was as much a constituent part of the fabric as the council of sachems. There is a transparency about the system that is very different from the obscurity we continually find in Europe and Asia, where different strata of ideas and institutions have been superimposed one upon another and crumpled and distorted with as little apparent significance or purpose as the porches and gables of a so-called "Queen Anne" house.[1] Conquest in the Old World has resulted in the commingling and manifold fusion of peoples in very different stages of development. In the New World there has been very little of that sort of thing. Conquest in ancient America was pretty much all of the Iroquois type, entailing in its milder form the imposition of tribute, in its more desperate form the extermination of a tribe with the adoption of its remnants into the similarly-

[1] For instance, the whole discussion in Gomme's *Village Community*, London, 1890, an excellent book, abounds with instances of this crumpling.

constituted tribe of the conquerors. There was therefore but little modification of the social structure while the people, gradually acquiring new arts, were passing through savagery and into a more or less advanced stage of barbarism. The symmetry of the structure and the relation of one institution to another is thus distinctly apparent.

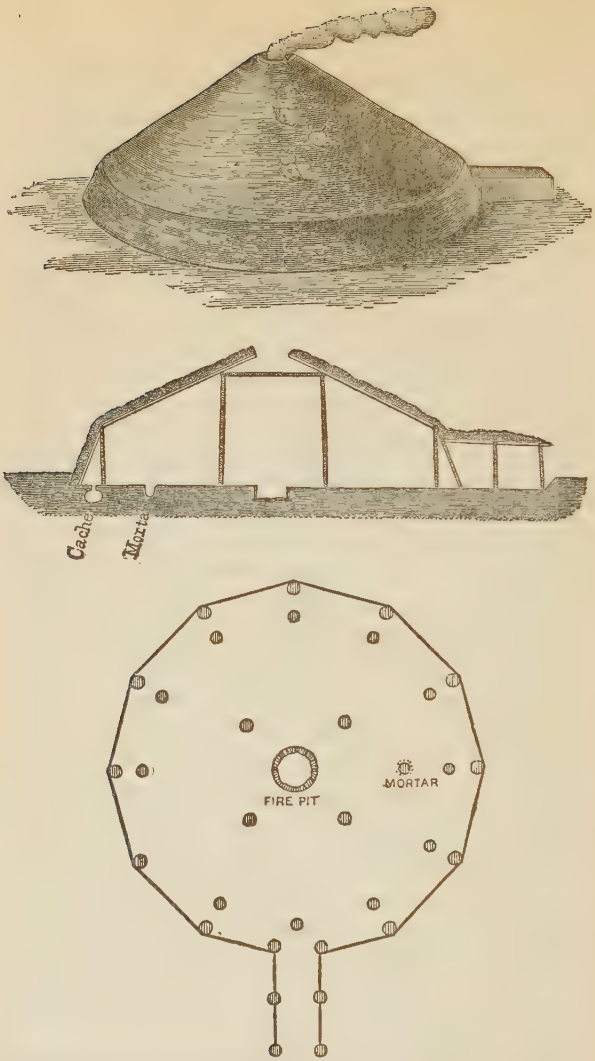
The communal household and the political structure built upon it, as above described in the case of the Iroquois, seem to have existed all over ancient North America, with agreement in fundamental characteristics and variation in details and degree of development. There are many corners as yet imperfectly explored, but hitherto, in so far as research has been rewarded with information, it all points in the same general direction. Among the tribes above enumerated as either in savagery or in the lower status of barbarism, so far as they have been studied, there seems to be a general agreement, as to the looseness of the marriage tie the clan with descent in the female line, the phratry, the tribe, the officers and councils, the social equality, the community in goods (with exceptions already noted), and the wigwam or house adapted to communal living.

The extreme of variation consistent with adherence to the common principle was to be found in the shape and material of the houses. Those of the savage tribes were but sorry huts. The long house was used by the Powhatans and other Algonquin tribes. The other most highly developed type may be illustrated by the circular frame-

houses of the Mandans.[1] These houses were from forty to sixty feet in diameter. A dozen or more posts, each about eight inches in diameter, were set in the ground, "at equal distances in the circumference of a circle, and rising about six feet above the level of the floor." The tops of the posts were connected by horizontal stringers; and outside each post a slanting wooden brace sunk in the ground about four feet distant served as a firm support to the structure. The spaces between these braces were filled by tall wooden slabs, set with the same slant and resting against the stringers. Thus the framework of the outer wall was completed. To support the roof four posts were set in the ground about ten feet apart in the form of a square, near the centre of the building. They were from twelve to fifteen feet in height, and were connected at the top by four stringers forming a square. The rafters rested upon these stringers and upon the top of the circular wall below. The rafters were covered with willow matting, and upon this was spread a layer of prairie grass. Then both wall and roof, from the ground up to the summit, were covered with earth, solid and hard, to a thickness of at least two feet. The rafters projected above the square framework at the summit, so as to leave a circular opening in the centre about four feet in diameter. This hole let in a little light, and let out some of the smoke from the fire which blazed underneath in a fire-pit lined with

Circular houses of the Mandans.

[1] Morgan, *Houses and House-Life*, pp. 126–129; Catlin's *North Amer. Indians*, i. 81 *ff.*



View, Cross-section, and Ground-plan of Mandan round house.

stone slabs set on edge. The only other aperture for light was the doorway, which was a kind of vestibule or passage some ten feet in length. Curtains of buffalo robes did duty instead of doors. The family compartments were triangles with base at the outer wall, and apex opening upon the central hearth; and the partitions were hanging mats or skins, which were tastefully fringed and ornamented with quill-work and pictographs.[1] In the lower Mandan village, visited by Catlin, there were about fifty such houses, each able to accommodate from thirty to forty persons. The village, situated upon a bold bluff at a bend of the Missouri river, and surrounded by a palisade of stout timbers more than ten feet in height, was very strong for defensive purposes. Indeed, it was virtually impregnable to Indian methods of attack, for the earth-covered houses could not be set on fire by blazing arrows, and just within the palisade ran a trench in which the defenders could securely skulk, while through the narrow chinks between the timbers they could shoot arrows fast enough to keep their assailants at a distance. This purpose was further secured by rude bastions, and considering the structure as a whole one cannot help admiring the ingenuity which it exhibits. It shows a marked superiority over the conceptions of military defence attained by the Iroquois or any other Indians north of New Mexico. Besides the communal houses the village contained its "medicine lodge," or council house, and an open area for games and ceremonies. In the spaces

[1] Catlin, i. 83.

between the houses were the scaffolds for drying maize, buffalo meat, etc., ascended by well-made portable ladders. Outside the village, at a short distance on the prairie, was a group of such scaffolds upon which the dead were left to moulder, somewhat after the fashion of the Parsees.[1]

We are now prepared to understand some essential points in the life of the groups of Indians occupying the region of the Cordilleras, both north and south of the Isthmus of Darien, all the way from Zuñi to Quito. The principal groups are the Moquis and Zuñis of Arizona and New Mexico, the Nahuas or Nahuatlac tribes of Mexico, the Mayas, Quichés, and kindred peoples of Central America; and beyond the isthmus, the Chibchas of New Granada, and sundry peoples comprised within the domain of the Incas. With regard to the ethnic relationships of these various groups, opinion is still in a state of confusion; but it is not necessary for our present purpose that we should pause to discuss the numerous questions thus arising. Our business is to get a clear notion in outline of the character of the culture to which these peoples had attained at the time of the Discovery. Here we observe, on the part of all, a very considerable divergence from the average Indian level which we have thus far been describing.

The Indians of the pueblos, — in the middle status of barbarism.

This divergence increases as we go from Zuñi toward Cuzco, reaching its extreme, on the whole, among the Peruvians, though in some respects the

[1] Catlin, i. 90.

nearest approach to civilization was made by the Mayas. All these peoples were at least one full ethnical period nearer to true civilization than the Iroquois, — and a vast amount of change and improvement is involved in the conception of an entire ethnical period. According to Mr. Morgan, one more such period would have brought the average level of these Cordilleran peoples to as high a plane as that of the Greeks described in the Odyssey. Let us now observe the principal points involved in the change, bearing in mind that it implies a considerable lapse of time. While the date 1325, at which the city of Mexico was founded, is the earliest date in the history of that country which can be regarded as securely established, it was preceded by a long series of generations of migration and warfare, the confused and fragmentary record of which historians have tried — hitherto with scant success — to unravel. To develop such a culture as that of the Aztecs out of an antecedent culture similar to that of the Iroquois must of course have taken a long time.

It will be remembered that the most conspicuous distinctive marks of the grade of culture attained by the Cordilleran peoples were two, — the cultivation of maize in large quantities by irrigation, and the use of adobe-brick or stone in building. Probably there was at first, to some extent, a causal connection between the former and the latter. The region of the Moqui-Zuñi culture is a region in which arid plains become richly fertile when water from neighbouring cliffs or peaks is

Horticulture with irrigation, and architecture with adobe.

directed down upon them. It is mainly an affair of sluices, not of pump or well, which seem to have been alike beyond the ken of aboriginal Americans of whatever grade. The change of occupation involved in raising large crops of corn by the aid of sluices would facilitate an increase in density of population, and would encourage a preference for agricultural over predatory life. Such changes would be likely to favour the development of defensive military art. The Mohawk's surest defence lay in the terror which his prowess created hundreds of miles away. One can easily see how the forefathers of our Moquis and Zuñis may have come to prefer the security gained by living more closely together and building impregnable fortresses.

The earthen wall of the Mandan, supported on a framework of posts and slabs, seems to me curiously and strikingly suggestive of the incipient pottery made by surrounding a basket with a coating of clay.[1] When it was discovered how to make the earthen bowl or dish without the basket, a new era in progress was begun. So when it was discovered that an earthen wall could be fashioned to answer the requirements of house-builders without the need of a permanent wooden framework, another great step was taken. Again the consequences were great enough to make it mark the beginning of a new ethnical period. If we suppose the central portion of our continent, the Mississippi and Missouri valleys, to have been occupied at

Possible origin of adobe architecture.

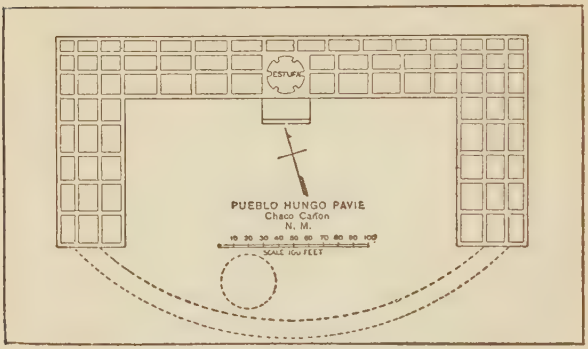
[1] See above, p. 25.

some time by tribes familiar with the Mandan style of building; and if we further suppose a gradual extension or migration of this population, or some part of it, westward into the mountain region; that would be a movement into a region in which timber was scarce, while adobe clay was abundant. Under such circumstances the useful qualities of that peculiar clay could not fail to be soon discovered. The simple exposure to sunshine would quickly convert a Mandan house built with it into an adobe house; the coating of earth would become a coating of brick. It would not then take long to ascertain that with such adobe-brick could be built walls at once light and strong, erect and tall, such as could not be built with common clay. In some such way as this I think the discovery must have been made by the ancestors of the Zuñis, and others who have built pueblos. After the pueblo style of architecture, with its erect walls and terraced stories, had become developed, it was an easy step, when the occasion suggested it, to substitute for the adobe-brick coarse rubble-stones embedded in adobe. The final stage was reached in Mexico and Yucatan, when soft coralline limestone was shaped into blocks with a flint chisel and laid in courses with adobe-mortar.

The pueblos of New Mexico and Arizona are among the most interesting structures in the world. Several are still inhabited by the descendants of the people who were living in them at the time of the Spanish Discovery, and their primitive customs and habits of thought have been preserved to the present day with but little

change. The long sojourn of Mr. Cushing, of the Bureau of Ethnology, in the Zuñi pueblo, has already thrown a flood of light upon many points in American archæology.[1] As in the case of American aborigines generally, the social life of these people is closely connected with their architecture, and the pueblos which are still inhabited seem to furnish us with the key to the interpretation of those that we find deserted or in ruins, whether in Arizona or in Guatemala.

Mr. Cushing at Zuñi.



In the architecture of the pueblos one typical form is reproduced with sundry variations in detail. The typical form is that of a solid block of buildings making three sides of an extensive rectangular en-

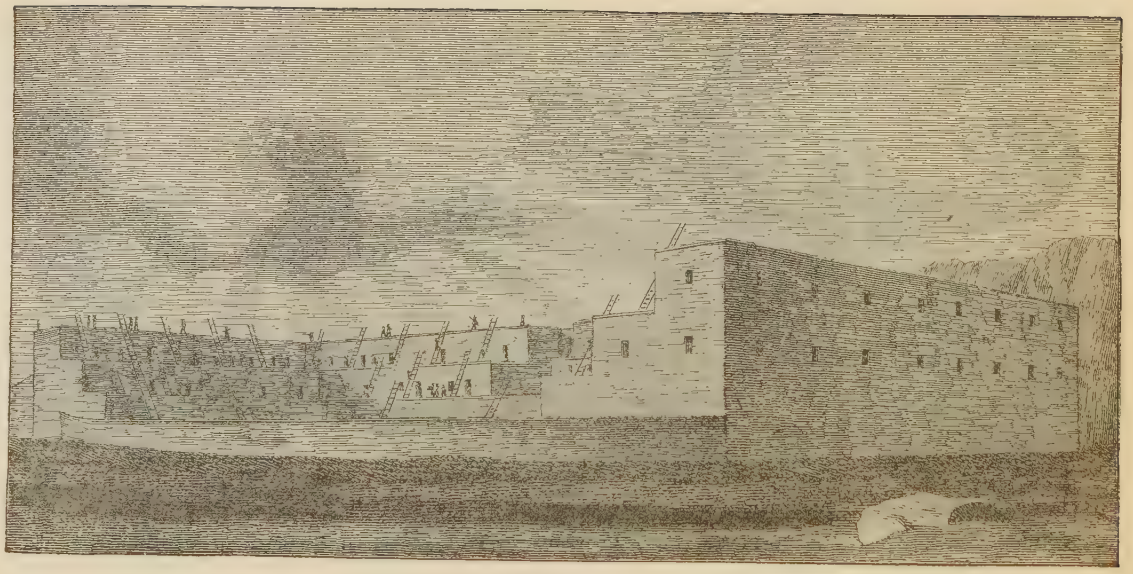
Typical structure of the pueblo.

[1] See his articles in the *Century Magazine*, Dec., 1882, Feb., 1883, May, 1883; and his papers on "Zuñi Fetiches," *Reports of the Bureau of Ethnology*, ii. 9–45; "A Study of Pueblo Pottery as Illustrative of Zuñi Culture Growth," id. iv. 473–521; see also Mrs. Stevenson's paper, "Religious Life of a Zuñi Child," id. v. 539–555; Sylvester Baxter, "An Aboriginal Pilgrimage," *Century Magazine*. Aug., 1882.

closure or courtyard. On the inside, facing upon the courtyard, the structure is but one story in height; on the outside, looking out upon the surrounding country, it rises to three, or perhaps even five or six stories. From inside to outside the flat roofs rise in a series of terraces, so that the floor of the second row is continuous with the roof of the first, the floor of the third row is continuous with the roof of the second, and so on. The fourth side of the rectangle is formed by a solid block of one-story apartments, usually with one or two narrow gateways overlooked by higher structures within the enclosure. Except these gateways there is no entrance from without; the only windows are frowning loop-holes, and access to the several apartments is gained through skylights reached by portable ladders. Such a structure is what our own forefathers would have naturally called a "burgh," or fortress; it is in one sense a house, yet in another sense a town;[1] its divisions are not so much houses as compartments; it is a joint-tenement affair, like the Iroquois long houses, but in a higher stage of development.

So far as they have been studied, the pueblo Indians are found to be organized in clans, with descent in the female line, as in the case of the ruder Indians above described. In the event of marriage the young husband goes to live with his wife, and she may turn him out of doors if he

[1] Cf. Greek *οἶκος*, "house," with Latin *vicus*, "street" or "village," Sanskrit *vesa*, "dwelling-place," English *wick*, "mansion" or "village."



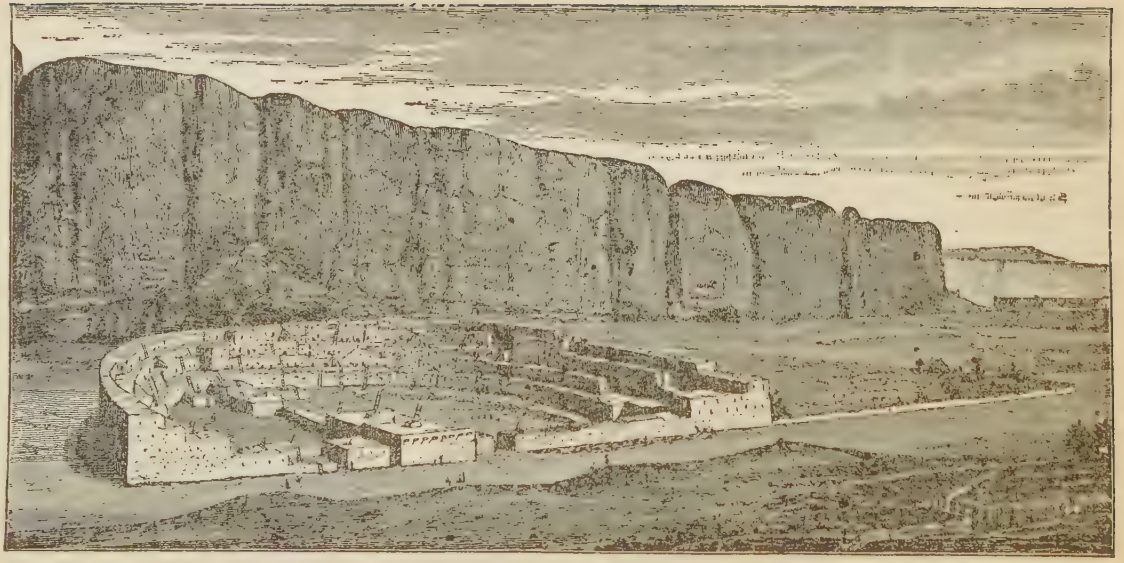
Restoration of Pueblo Hungo Pavie.

deserves it.[1] The ideas of property seem still limited to that of possessory right, with the ultimate title in the clan, except that portable articles subject to individual ownership have become more numerous. In government the council of sachems reappears with a principal sachem, or cacique, called by the Spaniards "gobernador." There is an organized priesthood, with distinct orders, and a ceremonial more elaborate than those of the ruder Indians. In every pueblo there is to be found at least one "estufa," or council-house, for governmental or religious transactions. Usually there are two or three or more such estufas. In mythology, in what we may call pictography or rudimentary hieroglyphics, as well as in ordinary handicrafts, there is a marked advance beyond the Indians of the lower status of barbarism, after making due allowances for such things as the people of the pueblos have learned from white men.[2]

Pueblo society.

[1] "With the woman rests the security of the marriage ties; and it must be said, in her high honour, that she rarely abuses the privilege; that is, never sends her husband 'to the home of his fathers,' unless he richly deserves it." But should not Mr. Cushing have said "home of his mothers," or perhaps, of "his sisters and his cousins and his aunts?" For a moment afterward he tells us, "To her belong all the children; and descent, including inheritance, is on her side." *Century Magazine*, May, 1883, p. 35.

[2] For example, since the arrival of the Spaniards some or perhaps all of the pueblos have introduced chimneys into their apartments; but when they were first visited by Coronado, he found the people wearing cotton garments, and Franciscan friars in 1581 remarked upon the superior quality of their shoes. In spinning and weaving, as well as in the grinding of meal, a notable advance had been made.



Restoration of Pueblo Bonito.

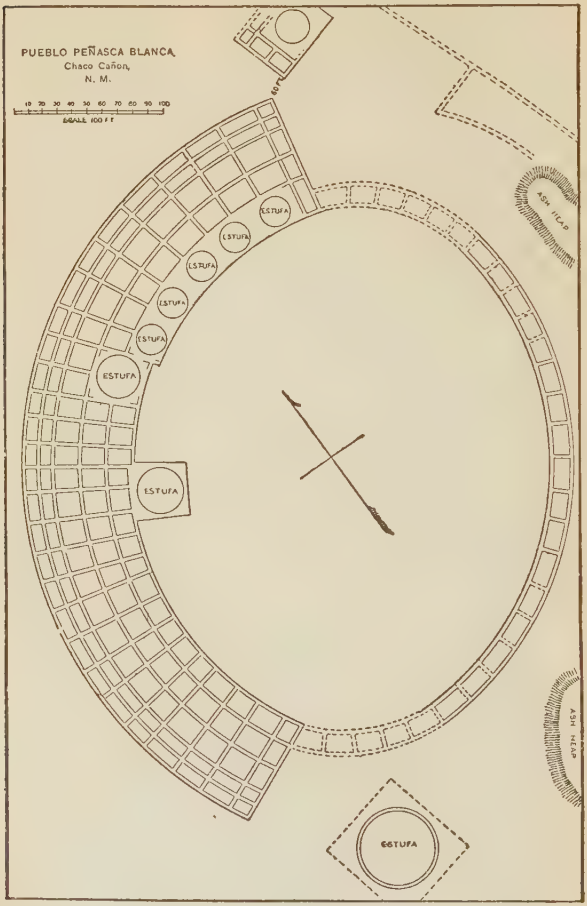
From the pueblos still existing, whether inhabited or in ruins, we may eventually get some sort of clue to the populations of ancient towns visited by the Spanish discoverers.[1] The pueblo of Zuñi seems to have had at one time a population of 5,000, but it has dwindled to less than 2,000. Of the ruined pueblos, built of stone with adobe mortar, in the valley of the Rio Chaco, the Pueblo Hungo Pavie contained 73 apartments in the first story, 53 in the second, and 29 in the third, with an average size of 18 feet by 13; and would have accommodated about 1,000 Indians. In the same valley Pueblo Bonito, with four stories, contained not less than 640 apartments, with room enough for a population of 3,000; within a third of a mile from this huge structure stood Pueblo Chettro Kettle, with 506 apartments. The most common variation from the rectangular shape was that in which a terraced semicircle was substituted for the three terraced sides, as in Pueblo Bonito, or the whole rectangular design was converted into an ellipse, as in Pueblo Peñasca Blanca. There are indications that these fortresses were not in all cases built at one time, but that, at least in some cases, they grew by gradual accretions.[2] The smallness of the distances between those in the Chaco valley suggests that their inhabitants must have been united in a confederation; and one can easily see that an actual juxtaposition or partial coalescence

Wonderful ancient pueblos in the Chaco valley.

[1] At least a better one than Mr. Prescott had when he naively reckoned five persons to a household, *Conquest of Mexico*, ii. 97.

[2] Morgan, *Houses and House-Life*, chap. vii.

of such communities would have made a city of very imposing appearance. The pueblos are al-



ways found situated near a river, and their gardens, lying outside, are easily accessible to sluices

from neighbouring cliffs or mesas. But in some cases, as the Wolpi pueblo of the Moquis, the whole stronghold is built upon the summit of the cliff; there is a coalescence of communal structures, each enclosing a courtyard, in which there is a spring for the water-supply; and the irrigated gardens are built in terrace-form just below on the bluff, and protected by solid walls. From this curious pueblo another transition takes us to the extraordinary cliff-houses found in the Chelly, Mancos, and McElmo cañons, and elsewhere, — veritable human eyries perched in crevices or clefts of the perpendicular rock, accessible only by dint of a toilsome and perilous climb; places of refuge, perhaps for fragments of tribes overwhelmed by more barbarous invaders, yet showing in their dwelling-rooms and estufas marks of careful building and tasteful adornment.[1]

The Moqui pueblos.

The cliff pueblos.

The pueblo of Zuñi is a more extensive and complex structure than the ruined pueblos on the Chaco river. It is not so much an enormous communal house as a small town formed of a number of such houses crowded together, with access from one to another along their roof-terraces. Some of the structures are of adobe brick, others of stone embedded in adobe mortar

Pueblo of Zuñi.

[1] For careful descriptions of the ruined pueblos and cliff-houses, see Nadaillac's *Prehistoric America*, chap. v., and Short's *North Americans of Antiquity*, chap. vii. The latter sees in them the melancholy vestiges of a people gradually "succumbing to their unpropitious surroundings — a land which is fast becoming a howling wilderness, with its scourging sands and roaming savage Bedouin — the Apaches."

and covered with plaster. There are two open plazas or squares in the town, and several streets, some of which are covered ways passing beneath the upper stories of houses. The effect, though not splendid, must be very picturesque, and would doubtless astonish and bewilder visitors unprepared for such a sight. When Coronado's men discovered Zuñi in 1540, although that style of building was no longer a novelty to them, they compared the place to Granada.

Now it is worthy of note that Cortes made the same comparison in the case of Tlascala, one of the famous towns at which he stopped on his march from Vera Cruz to the city of Mexico. In his letter to the emperor Charles V., he compared Tlascala to Granada, "affirming that it was larger, stronger, and more populous than the Moorish capital at the time of the conquest, and quite as well built." [1] Upon this Mr. Prescott observes, "we shall be slow to believe that its edifices could have rivalled those monuments of Oriental magnificence, whose light aerial forms still survive after the lapse of ages, the admiration of every traveller of sensibility and taste. The truth is that Cortes, like Columbus, saw objects through the warm medium of his own fond imagination, giving them a higher tone of colouring and larger dimensions than were strictly warranted by the fact." Or, as Mr. Bandelier puts

Pueblo of Tlascala.

[1] "La qual ciudad . . . es muy mayor que Granada, y muy mas fuerte, y de tan buenos edificios, y de mucha mas gente, que Granada tenia al tiempo que se gaño." Cortes, *Relacion segunda al Emperador*, ap. Lorenzana, p. 58, cited in Prescott's *Conquest of Mexico*, vol. i. p. 401 (7th ed., London, 1855).

it, when it comes to general statements about numbers and dimensions, "the descriptions of the conquerors cannot be taken as facts, only as the expression of feelings, honestly entertained but uncritical." From details given in various Spanish descriptions, including those of Cortes himself, it is evident that there could not have been much difference in size between Tlascala and its neighbour Cholula. The population of the latter town has often been given as from 150,000 to 200,000; but, from elaborate archæological investigations made on the spot in 1881, Mr. Bandelier concludes that it cannot have greatly exceeded 30,000. and this number really agrees with the estimates of two very important Spanish authorities, Las Casas and Torquemada, when correctly understood.[1] We may therefore suppose that the population of Tlascala was about 30,000. Now the population of the city of Granada, at the time of

[1] See Bandelier's *Archæological Tour in Mexico*, Boston, 1885, pp. 160–164. Torquemada's words, cited by Bandelier, are "Quando entraron los Españoles, dicen que tenia mas de quarenta mil vecinos esta ciudad." *Monarquia Indiana*, lib. iii. cap. xix. p. 281. A prolific source of error is the ambiguity in the word *vecinos*, which may mean either "inhabitants" or "householders." Where Torquemada meant 40,000 inhabitants, uncritical writers fond of the marvellous have understood him to mean 40,000 houses, and multiplying this figure by 5, the average number of persons *in a modern family*. have obtained the figure 200,000. But 40,000 houses peopled after the old Mexican fashion, with at least 200 persons in a house (to put it as low as possible), would make a city of 8,000,000 inhabitants! Las Casas, in his *Destruycion de las Indias*, vii., puts the population of Cholula at about 30,000. I observe that Llorente (in his *Œuvres de Las Casas*, tom. i. p. 38) translates the statement correctly. I shall recur to this point below, vol. ii p. 264.

its conquest by Ferdinand and Isabella, is said by the greatest of Spanish historians [1] to have been about 200,000. It would thus appear that Cortes sometimes let his feelings run away with him; and, all things considered, small blame to him if he did! In studying the story of the Spanish conquest of America, liberal allowance must often be made for inaccuracies of statement that were usually pardonable and sometimes inevitable.

But when Cortes described Tlascala as "quite as well built" as Granada, it is not at all likely that he was thinking about that exquisite Moorish architecture which in the mind of Mr. Prescott or any cultivated modern writer is the first thing to be suggested by the name. The Spaniards of those days did not admire the artistic work of "infidels;" they covered up beautiful arabesques with a wash of dirty plaster, and otherwise behaved very much like the Puritans who smashed the "idolatrous" statues in English cathedrals. When Cortes looked at Tlascala, and Coronado looked at Zuñi, and both soldiers were reminded of Granada, they were probably looking at those places with a professional eye as fortresses hard to capture; and from this point of view there was doubtless some justice in the comparison.

In the description of Tlascala by the Spaniards who first saw it, with its dark and narrow streets, its houses of adobe, or "the better sort" of stone laid in adobe mortar, and its flat and terraced roofs, one is irresistibly reminded of such a pueblo

[1] Mariana, *Historia de España*, Valencia, 1795, tom. viii. p. 317.

as Zuñi. Tlascala was a town of a type probably common in Mexico. In some respects, as will hereafter appear, the city of Mexico showed striking variations from the common type. Yet there too were to be seen the huge houses, with terraced roofs, built around a square courtyard; in one of them 450 Spaniards, with more than 1,000 Tlascalan allies, were accommodated; in another, called "Montezuma's palace," one of the conquerors, who came several times intending to see the whole of it, got so tired with wandering through the interminable succession of rooms that at length he gave it up and never saw them all.[1] This might have happened in such a building as Pueblo Bonito; and a suspicion is raised that Montezuma's city was really a vast composite pueblo, and that its so-called palaces were communal buildings in principle like the pueblos of the Chaco valley.

The ancient city of Mexico was a great composite pueblo.

Of course the Spanish discoverers could not be expected to understand the meaning of what they saw. It dazed and bewildered them. They knew little or nothing of any other kind of society than feudal monarchy, and if they made such mistakes as to call the head war-chief a "king" (i. e. feudal king) or "emperor," and the clan-chiefs "lords" or "noblemen," if they supposed that these huge fortresses

Natural mistake of the Spanish discoverers.

[1] "Et io entrai piu di quattro volte in una casa del gran Signor non por altro effetto che per vederla, et ogni volta vi camminauo tanto che mi stancauo, et mai la fini di vedere tutta." *Relatione fatta per un gentil' huomo del Signor Fernando Cortese*, apud Ramusio, *Navigationi et Viaggi*, Venice, 1556, tom. iii. fol. 309.

were like feudal castles and palaces in Europe, they were quite excusable. Such misconceptions were common enough before barbarous societies had been much studied; and many a dusky warrior, without a tithe of the pomp and splendour about him that surrounded Montezuma, has figured in the pages of history as a mighty potentate girt with many of the trappings of feudalism.[1] Initial misconceptions that were natural enough, indeed unavoidable, found expression in an absurdly inappropriate nomenclature; and then the use of wrong names and titles bore fruit in what one cannot properly call a theory but rather an incoherent medley of notions about barbaric society. Nothing could be further from *feudalism*, in which the relation of landlord and tenant is a fundamental element, than the society of the American aborigines, in which that relation was utterly unknown and inconceivable. This more primitive form of society is not improperly called *gentilism*, inasmuch as it is based upon the gens or clan, with communism in

Contrast between feudalism and gentilism.

[1] When Pocahontas visited London in 1616 she was received at court as befitted a "king's daughter," and the old Virginia historian, William Stith (born in 1689), says it was a "constant tradition" in his day that James I. "became jealous, and was highly offended at Mr. Rolfe for marrying a princess." The notion was that "if Virginia descended to Pocahontas, as it might do at Powhatan's death, at her own death the kingdom would be vested in Mr. Rolfe's posterity." Esten Cooke's *Virginia*, p. 100. Powhatan (i. e. Wahunsunakok, chief of the Powhatan tribe) was often called "emperor" by the English settlers. To their intense bewilderment he told one of them that his office would descend to his [maternal] brothers, even though he had sons living. It was thought that this could not be true.

living, and with the conception of individual ownership of property undeveloped. It was gentilism that everywhere prevailed throughout the myriads of unrecorded centuries during which the foremost races of mankind struggled up through savagery and barbarism into civilization, while weaker and duller races lagged behind at various stages on the way. The change from "gentile" society to political society as we know it was in some respects the most important change that has occurred in human affairs since men became human. It might be roughly defined as the change from personal to territorial organization. It was accomplished when the stationary clan became converted into the township, and the stationary tribe into the small state;[1] when the conception of individual property in land was fully acquired; when the tie of physical kinship ceased to be indispensable as a bond for holding a society together; when the *clansman* became a *citizen*. This momentous change was accomplished among the Greeks during a period begin-

Change from gentile society to political society.

[1] The small states into which tribes were at first transformed have in many cases survived to the present time as portions of great states or nations. The shires or counties of England, which have been reproduced in the United States, originated in this way, as I have briefly explained in my little book on *Civil Government in the United States*, p. 49. When you look on the map of England, and see the town of *Icklingham* in the county of *Suffolk*, it means that this place was once the "home" of the "Icklings" or "children of Ickel," a clan which formed part of the tribe of Angles known as "South folk." So the names of Gaulish tribes survived as names of French provinces, e. g. *Auvergne* from the *Arverni*, *Poitou* from the *Pictavi*, *Anjou* from the *Andecavi*, *Béarn* from the *Bigerrones*, etc.

ning shortly before the first Olympiad (B. C. 776), and ending with the reforms of Kleisthenes at Athens (B. C. 509); among the Romans it was accomplished by the series of legislative changes beginning with those ascribed to Servius Tullius (about B. C. 550), and perfected by the time of the first Punic War (B. C. 264–241). In each case about three centuries was required to work the change.[1] If now the reader, familiar with European history, will reflect upon the period of more than a thousand years which intervened between the date last named and the time when feudalism became thoroughly established, if he will recall to mind the vast and powerful complication of causes which operated to transform civil society from the aspect which it wore in the days of Regulus and the second Ptolemy to that which it had assumed in the times of Henry the Fowler or Fulk of Anjou, he will begin to realize how much "feudalism" implies, and what a wealth of experience it involves, above and beyond the change from "gentile" to "civil" society. It does not appear that any people in ancient America ever approached very near to this earlier change. None had fairly begun to emerge from gentilism; none had advanced so far as the Greeks of the first Olympiad or the Romans under the rule of the Tarquins.

The first eminent writer to express a serious

[1] "It was no easy task to accomplish such a fundamental change, however simple and obvious it may now seem. . . . Anterior to experience, a township, as the unit of a political system, was abstruse enough to tax the Greeks and Romans to the depths of their capacities before the conception was formed and set in practical operation." Morgan, *Ancient Society*, p. 218.

doubt as to the correctness of the earlier views of Mexican civilization was that sagacious Scotchman, William Robertson.[1] The illustrious statesman and philologist, Albert Gallatin, founder of the American Ethnological Society, published in the first volume of its "Transactions" an essay which recognized the danger of trusting the Spanish narratives without very careful and critical scrutiny.[2] It is to be observed that Mr. Gallatin approached the subject with somewhat more knowledge of aboriginal life in America than had been possessed by previous writers. A similar scepticism was expressed by Lewis Cass, who also knew a great deal about Indians.[3] Next came Mr. Morgan,[4] the man of path-breaking ideas, whose minute and profound acquaintance with Indian life was joined with a power of penetrating the hidden implications of facts so keen and so sure as to

Suspicions as to the erroneousness of the Spanish accounts.

[1] Robertson's *History of America*, 9th ed. vol. iii. pp. 274, 281.

[2] "Notes on the Semi-civilized Nations of Mexico, Yucatan, and Central America," *American Ethnological Society's Transactions*, vol. i., New York, 1852. There is a brief account of Mr. Gallatin's pioneer work in American philology and ethnology in Stevens's *Albert Gallatin*, pp. 386–396.

[3] Cass, "Aboriginal Structures," *North Amer. Review*, Oct., 1840.

[4] Mr. R. A. Wilson's *New History of the Conquest of Mexico*, Philadelphia, 1859, denounced the Spanish conquerors as wholesale liars, but as his book was ignorant, uncritical, and full of wild fancies, it produced little effect. It was demolished, with neatness and despatch, in two articles in the *Atlantic Monthly*, April and May, 1859, by the eminent historian John Foster Kirk, whose *History of Charles the Bold* is in many respects a worthy companion to the works of Prescott and Motley. Mr. Kirk had been Mr. Prescott's secretary.

amount to genius. Mr. Morgan saw the nature of the delusion under which the Spaniards laboured; he saw that what they mistook for feudal castles owned by great lords, and inhabited by dependent retainers, were really huge communal houses, owned and inhabited by clans, or rather by segments of overgrown clans. He saw this so vividly that it betrayed him now and then into a somewhat impatient and dogmatic manner of statement; but that was a slight fault, for what he saw was not the outcome of dreamy speculation but of scientific insight. His researches, which reduced "Montezuma's empire" to a confederacy of tribes dwelling in pueblos, governed by a council of chiefs, and collecting tribute from neighbouring pueblos, have been fully sustained by subsequent investigation.

Detection and explanation of the errors, by Lewis Morgan.

The state of society which Cortes saw has, indeed, passed away, and its monuments and hieroglyphic records have been in great part destroyed. Nevertheless some monuments and some hieroglyphic records remain, and the people are still there. Tlascalans and Aztecs, descendants in the eleventh or twelfth generation from the men whose bitter feuds gave such a golden opportunity to Cortes, still dwell upon the soil of Mexico, and speak the language in which Montezuma made his last harangue to the furious people. There is, moreover, a great mass of literature in Spanish, besides more or less in Nahuatl, written during the century following the conquest, and the devoted missionaries and painstaking administrators, who wrote books about the country in which they were

working, were not engaged in a wholesale conspiracy for deceiving mankind. From a really critical study of this literature, combined with archæological investigation, much may be expected; and a noble beginning has already been made. A more extensive acquaintance with Mexican literature would at times have materially modified Mr. Morgan's conclusions, though without altering their general drift. At this point the work has been taken up by Mr. Adolf Bandelier, of Highland, Illinois, to whose rare sagacity and untiring industry as a field archæologist is joined such a thorough knowledge of Mexican literature as few men before him have possessed. Armed with such resources, Mr. Bandelier is doing for the ancient history of America work as significant as that which Mommsen has done for Rome, or Baur for the beginnings of Christianity. When a sufficient mass of facts and incidents have once been put upon record, it is hard for ignorant misconception to bury the truth in a pit so deep but that the delving genius of critical scholarship will sooner or later drag it forth into the light of day.[1]

Adolf Bandelier's researches.

At this point in our exposition a very concise summary of Mr. Bandelier's results will suffice to

[1] A summary of Mr. Bandelier's principal results, with copious citation and discussion of original Spanish and Nahuatl sources, is contained in his three papers, "On the art of war and mode of warfare of the ancient Mexicans," — "On the distribution and tenure of land, and the customs with respect to inheritance, among the ancient Mexicans," — "On the social organization and mode of government of the ancient Mexicans." *Peabody Museum Reports*, vol. ii., 1876–79, pp. 95–161, 385–442, 557–699.

enable the reader to understand their import. What has been called the "empire of Montezuma" was in reality a confederacy of three tribes, the Aztecs, Tezcucans, and Tlacopans,[1] dwelling in three large composite pueblos situated very near together in one of the strongest defensive positions ever occupied by Indians. This Aztec confederacy extended its "sway" over a considerable portion of the Mexican peninsula, but that "sway" could not correctly be described as "empire," for it was in no sense a military occupation of the country. The confederacy did not have garrisons in subject pueblos or civil officials to administer their affairs for them. It simply sent some of its chiefs about from one pueblo to another to collect tribute. This tax consisted in great part of maize and other food, and each tributary pueblo reserved a certain portion of its tribal territory to be cultivated for the benefit of the domineering confederacy. If a pueblo proved delinquent or recalcitrant, Aztec warriors swooped down upon it in stealthy midnight assault, butchered its inhabitants and emptied its granaries, and when the paroxysm of rage had spent itself, went exulting homeward, carrying away women for concubines,

The Aztec confederacy.

[1] In the Iroquois confederacy the Mohawks enjoyed a certain precedence or seniority, the Onondagas had the central council-fire, and the Senecas, who had the two head war-chiefs, were much the most numerous. In the Mexican confederacy the various points of superiority seem to have been more concentrated in the Aztecs; but spoils and tribute were divided into five portions, of which Mexico and Tezcuco each took two, and Tlacopan one.

men to be sacrificed, and such miscellaneous booty as could be conveyed without wagons or beasts to draw them.[1] If the sudden assault, with scaling ladders, happened to fail, the assailants were likely to be baffled, for there was no artillery, and so little food could be carried that a siege meant starvation for the besiegers.

The tributary pueblos were also liable to be summoned to furnish a contingent of warriors to the war-parties of the confederacy, under the same penalties for delinquency as in the case of refusal of tribute. In such cases it was quite common for the confederacy to issue a peremptory summons, followed by a declaration of war. When a pueblo was captured, the only way in which the vanquished people could stop the massacre was by holding out signals of submission; a parley then sometimes adjusted the affair, and the payment of a year's tribute in advance induced the conquerors to depart, but captives once taken could seldom if ever be ransomed. If the parties could not agree upon terms, the slaughter was renewed, and sometimes went on until the departing victors left nought behind them but ruined houses belching from loop-hole and doorway lurid clouds of smoke and flame upon narrow silent streets heaped up with mangled corpses.

The sway of the Aztec confederacy over the Mexican peninsula was thus essentially similar to the sway of the Iroquois confederacy over a great part of the tribes between the Connecticut river

[1] The wretched prisoners were ordinarily compelled to carry the booty.

and the Mississippi. It was simply the levying of tribute, — a system of plunder enforced by terror. The so-called empire was "only a partnership formed for the purpose of carrying on the business of warfare, and that intended, not for the extension of territorial ownership, but only for an increase of the means of subsistence." [1] There was none of that coalescence and incorporation of peoples which occurs after the change from gentilism to civil society has been effected. Among the Mexicans, as elsewhere throughout North America, the tribe remained intact as the highest completed political integer.

Aztec clans.

The Aztec tribe was organized in clans and phratries, and the number of clans would indicate that the tribe was a very large one.[2] There were twenty clans, called in the Nahuatl language "calpullis." We may fairly suppose that the average size of a clan was larger

[1] Bandelier, *op. cit.* p. 563.

[2] The notion of an immense population groaning under the lash of taskmasters, and building huge palaces for idle despots must be dismissed. The statements which refer to such a vast population are apt to be accompanied by incompatible statements. Mr. Morgan is right in throwing the burden of proof upon those who maintain that a people without domestic animals or field agriculture could have been so numerous (*Anc. Soc.*, p. 195). On the other hand, I believe Mr. Morgan makes a grave mistake in the opposite direction, in underestimating the numbers that could be supported upon Indian corn even under a system of horticulture without the use of the plough. Some pertinent remarks on the extraordinary reproductive power of maize in Mexico may be found in Humboldt, *Essai politique sur la Nouvelle Espagne*, Paris, 1811, tom. iii. pp. 51–60; the great naturalist is of course speaking of the yield of maize in ploughed lands, but, after making due allowances, the yield under the ancient system must have been wellnigh unexampled in barbaric agriculture.

than the average tribe of Algonquins or Iroquois; but owing to the compact "city" life, this increase of numbers did not result in segmentation and scattering, as among Indians in the lower status. Each Aztec clan seems to have occupied a number of adjacent communal houses, forming a kind of precinct, with its special house or houses for official purposes, corresponding to the *estufas* in the New Mexican pueblos. The houses were the common property of the clan, and so was the land which its members cultivated; and such houses and land could not be sold or bartered away by the clan, or in anywise alienated. The idea of "real estate" had not been developed; the clan simply exercised a right of occupancy, and — as among some ruder Indians — its individual members exercised certain limited rights of user in particular garden-plots.

The clan was governed by a clan council, consisting of chiefs (*tecuhtli*) elected by the clan, and inducted into office after a cruel religious ordeal, in which the candidate was bruised, tortured, and half starved. An executive department was more clearly differentiated from the council than among the Indians of the lower status. The clan (*calpulli*) had an official head, or sachem, called the *calpullec;* and also a military commander called the *ahcacautin*, or "elder brother." The *ahcacautin* was also a kind of peace officer, or constable, for the precinct occupied by the clan, and carried about with him a staff of office; a tuft of white feathers attached to this staff betokened that his errand was one of death.

Clan officers.

The clan elected its *calpullec* and *ahcacautin*, and could depose them for cause.[1]

The members of the clan were reciprocally bound to aid, defend, and avenge one another; but wergild was no longer accepted, and the penalty for murder was death. The clan exercised the right of naming its members. Such names were invariably significant (as *Nezahualcoyotl*, "Hungry Coyote," *Axayacatl*, "Face-in-the-Water," etc.), and more or less "medicine," or superstitious association, was attached to the name. The clans also had their significant names and totems. Each clan had its peculiar religious rites, its priests or medicine-men who were members of the clan council, and its temple or medicine-house. Instead of burying their dead the Mexican tribes practised cremation; there was, therefore, no common cemetery, but the funeral ceremonies were conducted by the clan.

Rights and duties of the clan.

The clans of the Aztecs, like those of many other Mexican tribes, were organized into four phratries; and this divided the city of Mexico, as the Spaniards at once remarked, into four quarters. The phratry had acquired more functions than it possessed in the lower status. Besides certain religious and social duties, and besides its connection with the punishment of criminals, the Mexican phratry was an organization for military purposes.[2] The four

Aztec phratries.

[1] Compare this description with that of the institutions of Indians in the lower status, above, p. 69.

[2] In this respect it seems to have had some resemblance to the Roman *centuria* and Teutonic *hundred*. So in prehistoric Greece

phratries were four divisions of the tribal host, each with its captain. In each of the quarters was an arsenal, or "dart-house," where weapons were stored, and from which they were handed out to war-parties about to start on an expedition.

The supreme government of the Aztecs was vested in the tribal council composed of twenty members, one for each clan. The member, representing a clan, was not its *calpullec*, or "sachem;" he was one of the *tecuhtli*, or clan-chiefs, and was significantly called the "speaker" (*tlatoani*). The tribal council, thus composed of twenty speakers, was called the *tlatocan*, or "place of speech."[1] At least as often as once in ten days the council assembled at the *tecpan*, or official house of the tribe, but it could be convened whenever occasion required, and in cases of emergency was continually in session. Its powers and duties were similar to those of an ancient English shiremote, in so far as they were partly directive and partly judicial. A large part of its business was settling disputes between the

The tribal council.

we may perhaps infer from Nestor's advice to Agamemnon that a similar organization existed: —

> κρῖν' ἄνδρας κατὰ φῦλα, κατὰ φρήτρας, Ἀγάμεμνον,
> ὡς φρήτρη φρήρτηφιν ἀρήγῃ, φῦλα δὲ φύλοις.
>
> *Iliad*, ii. 362.

But the phratry seems never to have reached so high a development among the Greeks as among the Romans and the early English.

[1] Compare *parliament* from *parler*. These twenty were the "grandees," "counsellors," and "captains" mentioned by Bernal Diaz as always in Montezuma's company; "y siempre á la contina estaban en su compañía veinte grandes señores y consejeros y capitanes," etc. *Historia verdadera*, ii. 95. See Bandelier, *op. cit.* p. 646.

clans. It superintended the ceremonies of investiture with which the chiefs and other officers of the clans were sworn into office. At intervals of eighty days there was an "extra session" of the *tlatocan*, attended also by the twenty "elder brothers," the four phratry-captains, the two executive chiefs of the tribe, and the leading priests, and at such times a reconsideration of an unpopular decision might be urged; but the authority of the *tlatocan* was supreme, and from its final decision there could be no appeal.[1]

The executive chiefs of the tribe were two in number, as was commonly the case in ancient America. The tribal sachem, or civil executive, bore the grotesque title of *cihuacoatl*, or "snake-woman."[2] His relation to the tribe was in general like that of the *calpullec* to the clan. He executed the decrees of the tribal council, of which he was *ex officio* a member, and was responsible for the housing of tribute and its proper distribution among the clans. He was also chief judge, and he was lieutenant to the head war-chief in command of the tribal

The "snake-woman."

[1] Mr. Bandelier's note on this point gives an especially apt illustration of the confusion of ideas and inconsistencies of statement amid which the early Spanish writers struggled to understand and describe this strange society: *op. cit.* p. 651.

[2] In Aztec mythology Cihuacoatl was wife of the supreme night deity, Tezcatlipoca. Squier, *Serpent Symbol in America*, pp. 159–166, 174–183. On the connection between serpent worship and human sacrifices, see Fergusson's *Tree and Serpent Worship*, pp. 3–5, 38–41. Much evidence as to American serpent worship is collected in J. G. Müller's *Geschichte der amerikanischen Urreligionen*, Basel, 1855. The hieroglyphic emblem of the Aztec tribal sachem was a female head surmounted by a snake.

host.[1] He was elected for life by the tribal council, which could depose him for misconduct.

The office of head war-chief was an instance of primitive royalty in a very interesting stage of development. The title of this officer was *tlacatecuhtli*, or "chief-of-men."[2] He was primarily head war-chief of the Aztec tribe, but about 1430 became supreme military commander of the three confederate tribes, so that his office was one of peculiar dignity and importance. When the Spaniards arrived upon the scene Montezuma was *tlacatecuhtli*, and they naturally called him "king." To understand precisely how far such an epithet could correctly be applied to him, and how far it was misleading, we must recall the manner in which early kingship arose in Europe. The Roman *rex* was an officer elected for life; the typical Greek *basileus* was a somewhat more fully developed king, inasmuch as his office was becoming practically hereditary; otherwise *rex* was about equivalent to *basileus*. Alike in Rome and in Greece the king had at least three great functions, and possibly four.[3] He was, primarily, chief

The "chief-of men."

Evolution of kingship in Greece and Rome.

[1] Other tribes besides the Aztec had the "snake-woman." In the city of Mexico the Spaniards mistook him for a "second-king," or "royal lieutenant." In other towns they regarded him, somewhat more correctly, as "governor," and called him *gobernador*, — a title still applied to the tribal sachem of the pueblo Indians, as e. g. in Zuñi heretofore mentioned; see above p. 89.

[2] This title seems precisely equivalent to ἄναξ ἀνδρῶν, commonly applied to Agamemnon, and sometimes to other chieftains, in the Iliad.

[3] Ramsay's *Roman Antiquities*, p. 64; Hermann's *Political Antiquities of Greece*, p. 105; Morgan, *Anc. Soc.*, p. 248.

commander, secondly, chief priest, thirdly, chief judge; whether he had reached the fourth stage and added the functions of chief civil executive, is matter of dispute. Kingship in Rome and in most Greek cities was overthrown at so early a date that some questions of this sort are difficult to settle. But in all probability the office grew up through the successive acquisition of ritual, judicial, and civil functions by the military commander. The paramount necessity of consulting the tutelar deities before fighting resulted in making the general a priest competent to perform sacrifices and interpret omens;[1] he thus naturally became the most important among priests; an increased sanctity invested his person and office; and by and by he acquired control over the dispensation of justice, and finally over the whole civil administration. One step more was needed to develop the *basileus* into a despot, like the king of Persia, and that was to let him get into his hands the law-making power, involving complete control over taxation. When the Greeks and Romans became dissatisfied with the increasing powers of their kings, they destroyed the office. The

[1] Such would naturally result from the desirableness of securing unity of command. If Demosthenes had been in sole command of the Athenian armament in the harbour of Syracuse, and had been a *basileus*, with priestly authority, who can doubt that some such theory of the eclipse as that suggested by Philochorus would have been adopted, and thus one of the world's great tragedies averted? See Grote, *Hist. Greece*, vol. vii. chap. lx. M. Fustel de Coulanges, in his admirable book *La Cité antique*, pp. 205–210, makes the priestly function of the king primitive, and the military function secondary; which is entirely inconsistent with what we know of barbarous races.

Romans did not materially diminish its functions, but put them into commission, by entrusting them to two consuls of equal authority elected annually. The Greeks, on the other hand, divided the royal functions among different officers, as e. g. at Athens among the nine archons.[1]

The typical kingship in mediæval Europe, after the full development of the feudal system, was very different indeed from the kingship in early Greece and Rome. In the Middle Ages all priestly functions had passed into the hands of the Church.[2] A king like Charles VII. of France, or Edward III. of England, was military commander, civil magistrate, chief judge, and *supreme landlord;* the people were his tenants. That was the kind of king with which the Spanish discoverers of Mexico were familiar.

Mediæval kingship.

Now the Mexican *tlacatecuhtli*, or "chief-of-men," was much more like Agamemnon in point of kingship than like Edward III. He was not supreme landlord, for landlordship did not exist in Mexico. He was not chief judge or civil mag-

[1] It is worthy of note that the archon who retained the priestly function was called *basileus*, showing perhaps that at that time this had come to be most prominent among the royal functions, or more likely that it was the one with which reformers had some religious scruples about interfering. The Romans, too, retained part of the king's priestly function in an officer called *rex sacrorum*, whose duty was at times to offer a sacrifice in the forum, and then run away as fast as legs could carry him, — ἦν θύσας ὁ βασιλεὺς, κατὰ τάχος ἄπεισι φεύγων ἐξ ἀγορᾶς (!) Plutarch, *Quæst. Rom.* 63.

[2] Something of the priestly quality of "sanctity," however, surrounded the king's person; and the ceremony of anointing the king at his coronation was a survival of the ancient rite which invested the head war-chief with priestly attributes.

istrate; those functions belonged to the "snake-woman." Mr. Bandelier regards the "chief-of-men" as simply a military commander; but for reasons which I shall state hereafter,[1] it seems quite clear that he exercised certain very important priestly functions, although beside him there was a kind of high-priest or medicine-chief. If I am right in holding that Montezuma was a "priest-commander," then incipient royalty in Mexico had advanced at least one stage beyond the head war-chief of the Iroquois, and remained one stage behind the *basileus* of the Homeric Greeks.

Montezuma was a "priest-commander."

The *tlacatecuhtli*, or "chief-of-men," was elected by an assembly consisting of the tribal council, the "elder brothers" of the several clans, and certain leading priests. Though the office was thus elective, the choice seems to have been practically limited to a particular clan, and in the eleven chiefs who were chosen from 1375 to 1520 a certain principle or custom of succession seems to be plainly indicated.[2] There was a further limit to the order of succession. Allusion has been made to the four phratry-captains commanding the quarters of the

Mode of succession to the office.

[1] They can be most conveniently stated in connection with the story of the conquest of Mexico; see below, vol. ii. p. 278. When Mr. Bandelier completes his long-promised paper on the ancient Mexican religion, perhaps it will appear that he has taken these facts into the account.

[2] I cannot follow Mr. Bandelier in discrediting Clavigero's statement that the office of *tlacatecuhtli* "should always remain in the house of Acamapitzin," inasmuch as the eleven who were actually elected were all closely akin to one another. In point of fact it *did* remain "in the house of Acamapitzin."

city. Their cheerful titles were "man of the house of darts," "cutter of men," "bloodshedder," and "chief of the eagle and cactus." These captains were military chiefs of the phratries, and also magistrates charged with the duty of maintaining order and enforcing the decrees of the council in their respective quarters. The "chief of the eagle and cactus" was chief executioner, — Jack Ketch. He was not eligible for the office of "chief-of-men;" the three other phratry-captains were eligible. Then there was a member of the priesthood entitled "man of the dark house." This person, with the three eligible captains, made a quartette, and one of this privileged four *must* succeed to the office of "chief-of-men."

The eligibility of the "man of the dark house" may be cited here as positive proof that sometimes the "chief-of-men" could be a "priest-commander." That in all cases he acquired priestly functions after election, even when he did not possess them before, is indicated by the fact that at the ceremony of his induction into office he ascended to the summit of the pyramid sacred to the war-god Huitzilopochtli, where he was anointed by the high-priest with a black ointment, and sprinkled with sanctified water; having thus become consecrated he took a censer of live coals and a bag of copal, and as his first official act offered incense to the war-god.[1]

[1] H. H. Bancroft, *Native Races of the Pacific States*, vol. ii. p. 145. Hence the accounts of the reverent demeanour of the people toward Montezuma, though perhaps overcoloured, are not so absurd as Mr. Morgan deemed them. Mr. Morgan was sometimes too anxious to reduce Montezuma to the level of an Iroquois war-chief.

As the "chief-of-men" was elected, so too he could be deposed for misbehaviour. He was *ex officio* a member of the tribal council, and he had his official residence in the *tecpan*, or tribal house, where the meetings of the council were held, and where the hospitalities of the tribe were extended to strangers. As an administrative officer, the "chief-of-men" had little to do within the limits of the tribe; that, as already observed, was the business of the "snake-woman." But outside of the confederacy the "chief-of-men" exercised administrative functions. He superintended the collection of tribute. Each of the three confederate tribes appointed, through its tribal council, agents to visit the subjected pueblos and gather in the tribute. These agents were expressively termed *calpixqui*, "crop-gatherers." As these men were obliged to spend considerable time in the vanquished pueblos in the double character of tax-collectors and spies, we can imagine how hateful their position was. Their security from injury depended upon the reputation of their tribes for ruthless ferocity.[1] The tiger-like confederacy was only too ready to take offence; in the lack of a decent pretext it often went to war without one, simply in order to get human victims for sacrifice.

Manner of collecting tribute.

Once appointed, the tax-gatherers were directed

[1] As I have elsewhere observed in a similar case: — "Each summer there came two Mohawk elders, secure in the dread that Iroquois prowess had everywhere inspired; and up and down the Connecticut valley they seized the tribute of weapons and wampum, and proclaimed the last harsh edict issued from the savage council at Onondaga." *Beginnings of New England*, p. 121.

by the "chief-of-men." The tribute was chiefly maize, but might be anything the conquerors chose to demand, — weapons, fine pottery or featherwork, gold ornaments, or female slaves. Sometimes the tributary pueblo, instead of sacrificing all its prisoners of war upon its own altars, sent some of them up to Mexico as part of its tribute. The ravening maw of the horrible deities was thus appeased, not by the pueblo that paid the blackmail, but by the power that extorted it, and thus the latter obtained a larger share of divine favour. Generally the unhappy prisoners were forced to carry the corn and other articles. They were convoyed by couriers who saw that everything was properly delivered at the *tecpan*, and also brought information by word of mouth and by picture-writing from the *calpixqui* to the "chief-of-men." When the newly-arrived Spaniards saw these couriers coming and going they fancied that they were "ambassadors." This system of tribute-taking made it necessary to build roads, and this in turn facilitated, not only military operations, but trade, which had already made some progress albeit of a simple sort. These "roads" might perhaps more properly be called Indian trails,[1] but they served their purpose.

The general similarity of the Aztec confederacy

[1] See Salmeron's letter of August 13, 1531, to the Council of the Indies, cited in Bandelier, *op. cit.* p. 696. The letter recommends that to increase the security of the Spanish hold upon the country the roads should be made practicable for beasts and wagons. They were narrow paths running straight ahead up hill and down dale, sometimes crossing narrow ravines upon heavy stone culverts.

to that of the Iroquois, in point of social structure, is thus clearly manifest. Along with this general similarity we have observed some points of higher development, such as one might expect to find in traversing the entire length of an ethnical period. Instead of stockaded villages, with houses of bark or of clay supported upon a wooden framework, we have pueblos of adobe-brick or stone, in various stages of evolution, the most advanced of which present the appearance of castellated cities. Along with the systematic irrigation and increased dependence upon horticulture, we find evidences of greater density of population; and we see in the victorious confederacy a more highly developed organization for adding to its stock of food and other desirable possessions by the systematic plunder of neighbouring weaker communities. Naturally such increase in numbers and organization entails some increase in the number of officers and some differentiation of their functions, as illustrated in the representation of the clans (*calpulli*) in the tribal council (*tlatocan*), by speakers (*tlatoani*) chosen for the purpose, and not by the official heads (*calpullec*) of the clan. Likewise in the military commander-in-chief (*tlacatecuhtli*) we observe a marked increase in dignity, and — as I have already suggested and hope to maintain — we find that his office has been clothed with sacerdotal powers, and has thus taken a decided step toward kingship of the ancient type, as depicted in the Homeric poems.

Aztec and Iroquois confederacies contrasted.

No feature of the advance is more noteworthy

than the development of the medicine-men into an organized priesthood.[1] The presence of this priesthood and its ritual was proclaimed to the eyes of the traveller in ancient Mexico by the numerous tall truncated pyramids (*teocallis*), on the flat summits of which men, women, and children were sacrificed to the gods. This custom of human sacrifice seems to have been a characteristic of the middle period of barbarism, and to have survived, with diminishing frequency, into the upper period. There are abundant traces of its existence throughout the early Aryan world, from Britain to Hindustan, as well as among the ancient Hebrews and their kindred.[2] But among all these peoples, at the earliest times at which we can study them with trustworthy records, we find the custom of human sacrifice in an advanced stage of decline, and generally no longer accompanied by the custom of cannibalism in which it probably originated.[3] Among the Mexicans, however, when they were first visited by the Spaniards, cannibalism flourished as nowhere else in the world except perhaps in Fiji, and human sacrifices were con-

Aztec priesthood: human sacrifices.

[1] The priesthood was not hereditary, nor did it form a caste. There was no hereditary nobility in ancient Mexico, nor were there any hereditary vocations, as "artisans," "merchants," etc. See Bandelier, *op. cit.* p. 599.

[2] See the copious references in Tylor's *Primitive Culture*, ii. 340–371; Mackay, *Religious Development of the Greeks and Hebrews*, ii. 406–434; Oort and Hooykaas, *The Bible for Young People*, i. 30, 189–193; ii. 102, 220; iii. 21, 170, 316, 393, 395; iv. 85, 226. Ghillany, *Die Menschenopfer der alten Hebräer*, Nuremberg, 1842, treats the subject with much learning.

[3] Spencer, *Princip. Sociol.*, i. 287; Tylor, *op. cit.* ii. 345.

ducted on such a scale as could not have been witnessed in Europe without going back more than forty centuries.

The custom of sacrificing captives to the gods was a marked advance upon the practice in the lower period of barbarism, when the prisoner, unless saved by adoption into the tribe of his captors, was put to death with lingering torments. There were occasions on which the Aztecs tortured their prisoners before sending them to the altar,[1] but in general the prisoner was well-treated and highly fed, — fatted, in short, for the final banquet in which the worshippers participated with their savage deity.[2] In a more advanced stage of development than that which the Aztecs had reached, in the stage when agriculture became extensive enough to create a steady demand for servile labour, the practice of enslaving prisoners became general; and as slaves became more and more valuable, men gradually succeeded in compounding with their deities for easier terms, — a ram, or a kid, or a bullock, instead of the human victim.[3]

[1] Mr. Prescott, to avoid shocking the reader with details, refers him to the twenty-first canto of Dante's Inferno, *Conquest of Mexico*, vol. i. p. 64.

[2] See below, vol. ii. p. 283.

[3] The victim, by the offer of which the wrath of the god was appeased or his favour solicited, must always be some valued possession of the sacrificer. Hence, e. g., among the Hebrews "wild animals, as not being property, were generally considered unfit for sacrifice." (Mackay, *op. cit.* ii. 398.) Among the Aztecs (Prescott, *loc. cit.*) on certain occasions of peculiar solemnity the clan offered some of its own members, usually children. In the lack of prisoners such offerings would more often be necessary, hence one powerful incentive to war. The use of prisoners to

The ancient Mexicans had not arrived at this stage, which in the Old World characterized the upper period of barbarism. Slavery had, however, made a beginning among the Aztecs. The nucleus of the small slave-population of Mexico consisted of *outcasts*, persons expelled from the clan for some misdemeanour. The simplest case was that in which a member of a clan failed for two years to cultivate his garden-plot.[1] The delinquent member was deprived, not only of his right of user, but of all his rights as a clansman, and the only way to escape starvation was to work upon some other lot, either

Aztec slaves.

buy the god's favour was to some extent a substitute for the use of the clan's own members, and at a later stage the use of domestic animals was a further substitution. The legend of Abraham and Isaac (*Genesis*, xxii. 1–14) preserves the tradition of this latter substitution among the ancient Hebrews. Compare the Bœotian legend of the temple of Dionysos Aigobolos: — *θύοντες γὰρ τῷ θεῷ προήχθησάν ποτε ὑπὸ μέθης ἐς ὕβριν, ὥστε καὶ τοῦ Διονύσου τὸν ἱερέα ἀποκτείνουσιν· ἀποκτείναντας δὲ αὐτίκα ἐπέλαβε νόσος λοιμώδης· καὶ σφισιν ἀφίκετο ἅμα ἐκ Δελφῶν, τῷ Διονύσῳ θύειν παῖδα ὡραῖον· ἔτεσι δὲ οὐ πολλοῖς ὕστερον τὸν θεὸν φασιν αἶγα ἱερεῖον ὑπαλλάξαι σφίσιν ἀντὶ τοῦ παίδος.* Pausanias, ix. 8. A further stage of progress was the substitution of a mere inanimate symbol for a living victim, whether human or brute, as shown in the old Roman custom of appeasing "Father Tiber" once a year by the ceremony of drowning a lot of dolls in that river. Of this significant rite Mommsen aptly observes, "Die Ideen göttlicher Gnade und Versöhnbarkeit sind hier ununterscheidbar gemischt mit der frommen Schlauigkeit, welche es versucht den gefährlichen Herrn durch scheinhafte Befriedigung zu berücken und abzufinden." *Römische Geschichte*, 4e Aufl., 1865, bd i. p. 176. After reading such a remark it may seem odd to find the writer, in a footnote, refusing to accept the true explanation of the custom; but that was a quarter of a century ago, when much less was known about ancient society than now.

[1] Bandelier, *op. cit.* p. 611.

in his own or in some other clan, and be paid in such pittance from its produce as the occupant might choose to give him. This was slavery in embryo. The occupant did not own this outcast labourer, any more than he owned his lot; he only possessed a limited right of user in both labourer and lot. To a certain extent it was "adverse" or exclusive possession. If the slave ran away or was obstinately lazy, he could be made to wear a wooden collar and sold without his consent; if it proved too troublesome to keep him, the collared slave could be handed over to the priests for sacrifice.[1] In this class of outcasts and their masters we have an interesting illustration of a rudimentary phase of slavery and of private property.

At this point it is worthy of note that in the development of the family the Aztecs had advanced considerably beyond the point attained by Shawnees and Mohawks, and a little way toward the point attained in the patriarchal family of the ancient Romans and Hebrews. In the Aztec clan (which was exogamous[2]) the change to descent in the male line seems to have been accomplished before the time of the Discovery. Apparently it had been recently accomplished. Names for designating family relationships remained in that primitive stage in which no dis-

The Aztec family.

[1] There was, however, in this extreme case, a right of sanctuary. If the doomed slave could flee and hide himself in the *tecpan* before the master or one of his sons could catch him, he became free and recovered his clan-rights; and no third person was allowed to interfere in aid of the pursuer. Torquemada, *Monarquía indiana*, ii. 564–566.

[2] Bancroft, *Native Races of the Pacific States*, vol. ii. p. 251.

tinction is made between father and uncle, grandchildren and cousins. The family was still too feebly established to count for much in the structure of society, which still rested firmly upon the clan.[1] Nevertheless the marriage bonds were drawn much tighter than among Indians of the lower status, and penalties for incontinence were more severe. The wife became her husband's property and was entitled to the protection of his clan. All matrimonial arrangements were controlled by the clan, and no member of it, male or female, was allowed to remain unmarried, except for certain religious reasons. The penalty for contumacy was expulsion from the clan, and the same penalty was inflicted for such sexual irregularities as public opinion, still in what we should call quite a primitive stage, condemned. Men and women thus expelled went to swell the numbers of that small class of outcasts already noted. With men the result, as we have seen, was a kind of slavery; with women it was prostitution; and it is curious to see that the same penalty, entailing such a result, was visited alike upon unseemly frailty and upon refusal to marry. In either case the sin consisted in rebellion against the clan's standards of proper or permissible behaviour.

The inheritance in the male line, the beginnings of individual property in slaves, the tightening of the marriage bond, accompanied by the condemnation of sundry irregularities heretofore tolerated, are phenomena which we might expect to find associated together. They are germs of the up-

[1] Bandelier, *op. cit* pp. 429, 570, 620.

per status of barbarism, as well as of the earliest status of civilization more remotely to follow. The common cause, of which they are the manifestations, is an increasing sense of the value and importance of personal property. In the Old World this sense grew up during a pastoral stage of society such as the New World never knew, and by the ages of Abraham and Agamemnon[1] it had produced results such as had not been reached in Mexico at the time of the Discovery. Still the tendency in the latter country was in a similar direction. Though there was no notion of real estate, and the house was still clan-property, yet the number and value of articles of personal ownership had no doubt greatly increased during the long interval which must have elapsed since the ancestral Mexicans entered upon the middle status. The mere existence of large and busy market-places with regular and frequent fairs, even though trade had scarcely begun to emerge from the stage of barter, is sufficient proof of this. Such fairs and markets do not belong to the Mohawk chapter in human progress. They imply a considerable number and diversity of artificial products, valued as articles of personal property. A legitimate inference from them is the existence of a certain degree of luxury, though doubtless luxury of a barbaric type.

Aztec property.

[1] I here use these world-famous names without any implication as to their historical character, or their precise date, which are in themselves interesting subjects for discussion. I use them as best symbolizing the state of society which existed about the northern and eastern shores of the eastern Mediterranean, several centuries before the Olympiads.

It is at this point, I think, that a judicious critic will begin to part company with Mr. Morgan. As regards the outward aspect of the society which the Spaniards found in Mexico, that eminent scholar more than once used arguments that were inconsistent with principles of criticism laid down by himself. At the beginning of his chapter on the Aztec confederacy Mr. Morgan proposed the following rules: —

Mr. Morgan's rules.

"The histories of Spanish America may be trusted in whatever relates to the acts of the Spaniards, and to the acts and personal characteristics of the Indians; in whatever relates to their weapons, implements and utensils, fabrics, food and raiment, and things of a similar character.

"But in whatever relates to Indian society and government, their social relations and plan of life, they are nearly worthless, because they learned nothing and knew nothing of either. We are at full liberty to reject them in these respects and commence anew; using any facts they may contain which harmonize with what is known of Indian society."[1]

Perhaps it would have been better if the second of these rules had been somewhat differently worded; for even with regard to the strange society and government, the Spanish writers have recorded an immense number of valuable facts, without which Mr. Bandelier's work would have been impossible. It is not so much the *facts* as the *interpretations* of the Spanish historians that are "nearly worthless," and even their misinter-

[1] Morgan, *Ancient Society*, p. 186, note.

pretations are interesting and instructive when once we rightly understand them. Sometimes they really help us toward the truth.

The broad distinction, however, as stated in Mr. Morgan's pair of rules, is well taken. In regard to such a strange form of society the Spanish discoverers of Mexico could not help making mistakes, but in regard to utensils and dress their senses were not likely to deceive them, and their statements, according to Mr. Morgan, may be trusted. Very good. But as soon as Mr. Morgan had occasion to write about the social life of the Aztecs, he forgot his own rules and paid as little respect to the senses of eye-witnesses as to their judgment. This was amusingly illustrated in his famous essay on "Montezuma's Dinner."[1] When Bernal Diaz describes Montezuma as sitting on a low chair at a table covered with a white cloth, Mr. Morgan declares that it could not have been so, — there were no chairs or tables! On second thought he will admit that there may have been a wooden block hollowed out for a stool, but in the matter of a table he is relentless. So when Cortes, in his despatch to the emperor, speaks of the "wine-cellar" and of the presence of "secretaries" at dinner, Mr. Morgan observes, "Since cursive writing was unknown among the Aztecs, the presence of these secretaries is an amusing feature in the account. The wine-cellar also is remarkable for two reasons: firstly, because the

Mr. Morgan sometimes disregarded his own rules: "Montezuma's Dinner."

[1] *North Amer. Review*, April, 1876. The substance of it was reproduced in his *Houses and House-Life*, chap. x.

level of the streets and courts was but four feet above the level of the water, which made cellars impossible; and, secondly, because the Aztecs had no knowledge of wine. An acid beer (*pulque*), made by fermenting the juice of the maguey, was a common beverage of the Aztecs; but it is hardly supposable that even this was used at dinner."[1]

To this I would reply that the fibre of that same useful plant from which the Aztecs made their "beer" supplied them also with paper, upon which they were in the habit of writing, not indeed in cursive characters, but in hieroglyphics. This kind of writing, as well as any other, accounts for the presence of secretaries, which seems to me, by the way, a very probable and characteristic feature in the narrative. From the moment the mysterious strangers landed, every movement of theirs had been recorded in hieroglyphics, and there is no reason why notes of what they said and did should not have been taken at dinner. As for the place where the *pulque* was kept, it was a venial slip of the pen to call it a "wine-cellar," even if it was not below the ground. The language of Cortes does not imply that he visited the "cellar;" he saw a crowd of Indians drinking the beverage, and supposing the great house he was in to be Montezuma's, he expressed his sense of that person's hospitality by saying that "his wine-cellar was open to all." And really, is it not rather a captious criticism which in one breath chides Cortes for calling the beverage "wine," and in the next breath goes on to call it "beer"?

[1] *Houses and House-Life*, p. 241.

The *pulque* was neither the one nor the other; for want of any other name a German might have called it beer, a Spaniard would be more likely to call it wine. And why is it "hardly supposable" that *pulque* was used at dinner? Why should Mr. Morgan, who never dined with Montezuma, know so much more about *such things* than Cortes and Bernal Diaz, who did?[1]

The reaction against uncritical and exaggerated statements.

The Spanish statements of facts are, of course, not to be accepted uncritically. When we are told of cut slabs of porphyry inlaid in the walls of a room, we have a right to inquire how so hard a stone could be cut with flint or copper chisels,[2] and are ready to entertain the suggestion that some other stone might easily have been mistaken for porphyry. Such a critical inquiry is eminently profitable, and none the less so when it brings us to the conclusion that the Aztecs did succeed in cutting porphyry. Again, when we read about Indian armies of 200,000 men, pertinent questions arise as to the commissariat, and we are led to reflect that there is nothing about which old soldiers spin such unconscionable yarns as about the size

[1] Mr. Andrew Lang asks some similar questions in his *Myth, Ritual, and Religion*, vol. ii. p. 349, but in a tone of impatient contempt which, as applied to a man of Mr. Morgan's calibre, is hardly becoming.

[2] For an excellent account of ancient Mexican knives and chisels, see Dr. Valentini's paper on "Semi-Lunar and Crescent-Shaped Tools," in *Proceedings of Amer. Antiq. Soc.*, New Series, vol. iii. pp. 449–474. Compare the very interesting Spanish observations on copper hatchets and flint chisels in Clavigero, *Historia antigua*, tom. i. p. 242; Mendieta, *Historia ecclesiastica indiana*, tom. iv. cap. xii.

of the armies they have thrashed. In a fairy tale, of course, such suggestions are impertinent; things can go on anyhow. In real life it is different. The trouble with most historians of the conquest of Mexico has been that they have made it like a fairy tale, and the trouble with Mr. Morgan was that, in a wholesome and much-needed spirit of reaction, he was too much inclined to dismiss the whole story as such. He forgot the first of his pair of rules, and applied the second to everything alike. He felt "at full liberty to reject" the testimony of the discoverers as to what they saw and tasted, and to "commence anew," reasoning from "what is known of Indian society." And here Mr. Morgan's mind was so full of the kind of Indian society which he knew more minutely and profoundly than any other man, that he was apt to forget that there could be any other kind. He overlooked his own distinction between the lower and middle periods of barbarism in his attempt to ignore or minimize the points of difference between Aztecs and Iroquois.[1] In this way he did injustice to his own brilliant and useful classification of stages of culture, and in particular to the middle period of barbarism, the significance of which he was the first to detect, but failed to realize fully because his attention had been so intensely concentrated upon the lower period.

[1] It often happens that the followers of a great man are more likely to run to extremes than their master, as, for example, when we see the queen of pueblos rashly described as "a collection of mud huts, such as Cortes found and dignified with the name of a city." *Smithsonian Report*, 1887, part i. p. 691. This is quite inadmissible.

In truth, the middle period of barbarism was one of the most important periods in the career of the human race, and full of fascination to the student, as the unfading interest in ancient Mexico and the huge mass of literature devoted to it show. It spanned the interval between such society as that of Hiawatha and such as that of the Odyssey. One more such interval (and, I suspect, a briefer one, because the use of iron and the development of inheritable wealth would accelerate progress) led to the age that could *write* the Odyssey, one of the most beautiful productions of the human mind. If Mr. Morgan had always borne in mind that, on his own classification, Montezuma must have been at least as near to Agamemnon as to Powhatan, his attitude toward the Spanish historians would have been less hostile. A Moqui pueblo stands near the lower end of the middle period of barbarism; ancient Troy stood next the upper end. Mr. Morgan found apt illustrations in the former; perhaps if he had lived long enough to profit by the work of Schliemann and Bandelier, he might have found equally apt ones in the latter. Mr. Bandelier's researches certainly show that the ancient city of Mexico, in point of social development, stood somewhere between the two.

Importance of the middle period of barbarism.

How that city looked may best be described when we come to tell what its first Spanish visitors saw. Let it suffice here to say that, upon a reasonable estimate of their testimony, pleasure-gardens, menageries and aviaries, fountains and baths, tessellated marble floors, finely wrought pot-

tery, exquisite feather-work, brilliant mats and tapestries, silver goblets, dainty spices burning in golden censers, varieties of highly seasoned dishes, dramatic performances, jugglers and acrobats, ballad singers and dancing girls, — such things were to be seen in this city of snake-worshipping cannibals. It simulated civilization as a tree-fern simulates a tree.

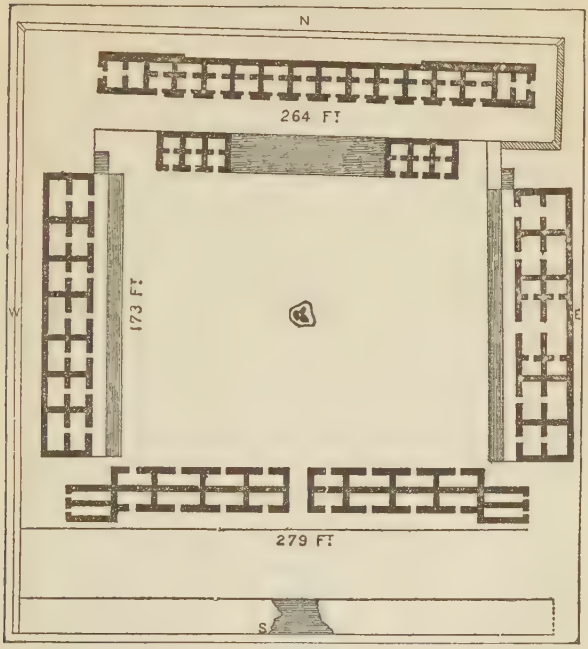
In its general outlines the account here given of Aztec society and government at the time of the Discovery will probably hold true of all the semi-civilized communities of the Mexican peninsula and Central America. The pueblos of Mexico were doubtless of various grades of size, strength, and comfort, ranging from such structures as Zuñi up to the city of Mexico. The cities of Chiapas, Yucatan, and Guatemala, whose ruins, in those tropical forests, are so impressive, probably belong to the same class. The Maya-Quiché tribes, who dwelt and still dwell in this region, were different in stock-language from their neighbours of Mexico ; but there are strong reasons for believing that the two great groups, Mexicans and Mayas, arose from the expansion and segmentation of one common stock, and there is no doubt as to the very close similarity between the two in government, religion, and social advancement. In some points the Mayas were superior. They possessed a considerable literature, written in highly developed hieroglyphic characters upon maguey paper and upon deerskin parchment, so that from this point of view they

Mexicans and Mayas.

stood upon the threshold of civilization as strictly defined.[1] But, like the Mexicans, they were igno-

[1] This writing was at once recognized by learned Spaniards, like Las Casas, as entirely different from anything found elsewhere in America. He found in Yucatan "letreros de ciertos caracteres que en otra ninguna parte," Las Casas, *Historia apologética*, cap. cxxiii. For an account of the hieroglyphics, see the learned essays of Dr. Cyrus Thomas, *A Study of the Manuscript Troano*, Washington, 1882; "Notes on certain Maya and Mexican MSS.," *Third Report of the Bureau of Ethnology*, pp. 7–153; "Aids to the Study of the Maya Codices," *Sixth Report*, pp. 259–371. (The paper last mentioned ends with the weighty words, "The more I study these characters the stronger becomes the conviction that they have grown out of a pictographic system similar to that common among the Indians of North America." Exactly so; and this is typical of every aspect and every detail of ancient American culture. It is becoming daily more evident that the old notion of an influence from Asia has not a leg to stand on.) See also a suggestive paper by the astronomer, E. S. Holden, "Studies in Central American Picture-Writing," *First Report of the Bureau of Ethnology*, pp. 205–245; Brinton, *Ancient Phonetic Alphabet of Yucatan*, New York, 1870; *Essays of an Americanist*, Philadelphia, 1890, pp. 193–304; Léon de Rosny, *Les écritures figuratives*, Paris, 1870; *L'interprétation des anciens textes Mayas*, Paris, 1875; *Essai sur le déchiffrement de l'écriture hiératique de l'Amérique Centrale*, Paris, 1876; Förstemann, *Erläuterungen der Maya Handschrift*, Dresden, 1886. The decipherment is as yet but partially accomplished. The Mexican system of writing is clearly developed from the ordinary Indian pictographs; it could not have arisen from the Maya system, but the latter might well have been a further development of the Mexican system; the Maya system had probably developed some characters with a phonetic value, i. e. was groping toward the alphabetical stage; but how far this groping had gone must remain very doubtful until the decipherment has proceeded further. Dr. Isaac Taylor is too hasty in saying that "the Mayas employed twenty-seven characters which must be admitted to be alphabetic" (Taylor, *The Alphabet*, vol. i. p. 24); this statement is followed by the conclusion that the Maya system of writing was "superior in simplicity and convenience to that employed . . . by the great Assyrian nation at the epoch of its greatest power and glory."

rant of iron, their society was organized upon the principle of gentilism, they were cannibals and sacrificed men and women to idols, some of which were identical with those of Mexico. The Mayas had no conception of property in land; their



Ground-plan of so-called "House of the Nuns" at Uxmal.

buildings were great communal houses, like pueblos; in some cases these so-called palaces, at first supposed to be scanty remnants of vast cities, were themselves the entire "cities;" in other cases

Dr. Taylor has been misled by Diego de Landa, whose work (*Relation des choses de l'Yucatan*, ed. Brasseur, Paris, 1864) has in it some pitfalls for the unwary.

there were doubtless large composite pueblos fit to be called cities.

These noble ruins have excited great and increasing interest since the publication of Mr. Stephens's charming book just fifty years ago.[1] An air of profound mystery surrounded them, and many wild theories were propounded to account for their existence. They were at first accredited with a fabulous antiquity, and in at least one instance this notion was responsible for what must be called misrepresentation, if not humbug.[2] Having been placed

Ruined cities of Central America.

[1] Stephens, *Incidents of Travel in Central America, Chiapas, and Yucatan*, 2 vols., New York, 1841.

[2] It occurred in the drawings of the artist Fréderic de Waldeck, who visited Palenque before Stephens, but whose researches were published later. "His drawings," says Mr. Winsor, "are exquisite; but he was not free from a tendency to improve and restore, where the conditions gave a hint, and so as we have them in the final publication they have not been accepted as wholly trustworthy." *Narr. and Crit. Hist.*, i. 194. M. de Charnay puts it more strongly. Upon his drawing of a certain panel at Palenque, M. de Waldeck "has seen fit to place three or four elephants. What end did he propose to himself in giving this fictitious representation? Presumably to give a prehistoric origin to these ruins, since it is an ascertained fact that elephants in a fossil state only have been found on the American continent. It is needless to add that neither Catherwood, who drew these inscriptions most minutely, nor myself who brought impressions of them away, nor living man, ever saw these elephants and their fine trunks. But such is the mischief engendered by preconceived opinions. With some writers it would seem that to give a recent date to these monuments would deprive them of all interest. It would have been fortunate had explorers been imbued with fewer prejudices and gifted with a little more common sense, for then we should have known the truth with regard to these ruins long since." Charnay, *The Ancient Cities of the New World*, London, 1887, p. 248. The gallant explorer's indignation is certainly quite pardonable.

by popular fancy at such a remote age, they were naturally supposed to have been built, not by the Mayas, — who still inhabit Yucatan and do not absolutely dazzle us with their exalted civilization, — but by some wonderful people long since vanished. Now as to this point the sculptured slabs of Uxmal and Chichen-Itza tell their own story. They are covered with hieroglyphic inscriptions, and these hieroglyphs are the same as those in which the Dresden Codex and other Maya manuscripts still preserved are written; though their decipherment is not yet complete, there is no sort of doubt as to their being written in the Maya characters. Careful inspection, moreover, shows that the buildings in which these inscriptions occur are not so very ancient. Mr. Stephens, who was one of their earliest as well as sanest explorers, believed them to be the work of the Mayas at a comparatively recent period.[1] The notion of their antiquity was perhaps suggested by the belief that certain colossal mahogany trees

[1] Some of his remarks are worth quoting in detail, especially in view of the time when they were written: "I repeat my opinion that we are not warranted in going back to any ancient nation of the Old World for the builders of these cities; that they are not the work of people who have passed away and whose history is lost, but that there are strong reasons to believe them the creations of the same races who inhabited the country at the time of the Spanish conquest, or some not very distant progenitors. And I would remark that we began our exploration without any theory to support. . . . Some are beyond doubt older than others; some are known to have been inhabited at the time of the Spanish conquest, and others, perhaps, were really in ruins before; . . . but in regard to Uxmal, at least, we believe that it was an existing and inhabited city at the time of the arrival of the Spaniards." Stephens, *Central America*, etc., vol. ii. p. 455.

growing between and over the ruins at Palenque must be nearly 2,000 years old. But when M. de Charnay visited Palenque in 1859 he had the eastern side of the "palace" cleared of its dense vegetation in order to get a good photograph; and when he revisited the spot in 1881 he found a sturdy growth of young mahogany the age of which he knew did not exceed twenty-two years. Instead of making a ring once a year, as in our sluggish and temperate zone, these trees had made rings at the rate of about one in a month; their trunks were already more than two feet in diameter; judging from this rate of growth the biggest giant on the place need not have been more than 200 years old, if as much.[1]

These edifices are not so durably constructed as those which in Europe have stood for more than a thousand years. They do not indicate a high civilization on the part of their builders. They do not, as Mr. Andrew Lang says, "throw Mycenæ into the shade, and rival the remains of Cambodia."[2] In pictures they may seem to do so, but M. de Charnay, after close and repeated examination of these buildings, assures us that as structures they "cannot be compared with those at Cambodia, which belong to nearly the same period, the twelfth century, and which, notwithstanding their greater and more resisting proportions, are found in the same dilapidated condi-

They are probably not older than the twelfth century.

[1] Charnay, *The Ancient Cities of the New World*, p. 260.

[2] Lang, *Myth, Ritual, and Religion*, vol. ii. p. 348.

tion."[1] It seems to me that if Mr. Lang had spoken of the Yucatan ruins as rivalling the remains of Mycenæ, instead of "throwing them into the shade," he would have come nearer the mark. The builders of Uxmal, like those of Mycenæ, did not understand the principle of the arch, but were feeling their way toward it.[2] And here again we are brought back, as seems to happen whatever road we follow, to the middle status of barbarism. The Yucatan architecture shows the marks of its origin in the adobe and rubble-stone work of the New Mexico pueblos. The inside of the wall "is a rude mixture of friable mortar and small irregular stones," and under the pelting tropical rains the dislocation of the outer facing is presently effected. The large blocks, cut with flint chisels, are of a soft stone that is soon damaged by weather; and the cornices and lintels are beams of a very hard wood, yet not so hard but that insects bore into it. From such considerations it is justly inferred that the highest probable antiquity for most of the ruins in Yucatan or Central America is the twelfth or thirteenth century of our era.[3] Some, perhaps, may be no older than the ancient city of Mexico, built A. D. 1325.

[1] Charnay, *op. cit.* p. 209. "I may remark that [the] virgin forests [here] have no very old trees, being destroyed by insects, moisture, lianas, etc.; and old monteros tell me that mahogany and cedar trees, which are most durable, do not live above 200 years," id. p. 447.

[2] The reader will find it suggestive to compare portions of Schliemann's *Mycenæ* and M. de Charnay's book, just cited, with Morgan's *Houses and House-Life*, chap. xi.

[3] Charnay, *op. cit.* p. 411. Copan and Palenque may be two or three centuries older, and had probably fallen into ruins before the arrival of the Spaniards.

But we are no longer restricted to purely archæological evidence. One of the most impressive of all these ruined cities is Chichen-Itza, which is regarded as older than Uxmal, but not so old as Izamal. Now in recent times sundry old Maya documents have been discovered in Yucatan, and among them is a brief history of the Spanish conquest of that country, written in the Roman character by a native chief, Nakuk Pech, about 1562. It has been edited, with an English translation, by that zealous and indefatigable scholar, to whom American philology owes such a debt of gratitude, — Dr. Daniel Brinton. This chronicle tells us several things that we did not know before, and, among others, it refers most explicitly to Chichen-Itza and Izamal as inhabited towns during the time that the Spaniards were coming, from 1519 to 1542. If there could have been any lingering doubt as to the correctness of the views of Stephens, Morgan, and Charnay, this contemporaneous documentary testimony dispels it once for all.[1]

Chronicle of Chicxulub.

[1] Brinton, *The Maya Chronicles*, Philadelphia, 1882, "Chronicle of Chicxulub," pp. 187–259. This book is of great importance, and for the ancient history of Guatemala Brinton's *Annals of the Cakchiquels*, Philadelphia, 1885, is of like value and interest.

Half a century ago Mr. Stephens wrote in truly prophetic vein, "the convents are rich in manuscripts and documents written by the early fathers, caciques, and Indians, who very soon acquired the knowledge of Spanish and the art of writing. These have never been examined with the slightest reference to this subject; *and I cannot help thinking that some precious memorial is now mouldering in the library of a neighbouring convent, which would determine the history of some one of these ruined cities.*" Vol. ii. p. 456. The italicizing, of course, is mine.

The Mexicans and Mayas believed themselves to be akin to each other, they had several deities and a large stock of traditional lore in common, and there was an essential similarity in their modes of life; so that, since we are now assured that such cities as Izamal and Chichen-Itza were contemporary with the city of Mexico, we shall probably not go very far astray if we assume that the elaborately carved and bedizened ruins of the former may give us some hint as to how things might have looked in the latter. Indeed this complicated and grotesque carving on walls, door-posts, and lintels was one of the first things to attract the attention of the Spaniards in Mexico. They regarded it with mingled indignation and awe, for serpents, coiled or uncoiled, with gaping mouths, were most conspicuous among the objects represented. The visitors soon learned that all this had a symbolic and religious meaning, and with some show of reason they concluded that this strange people worshipped the Devil.

Maya culture very closely related to Mexican.

We have now passed in review the various peoples of North America, from the Arctic circle to the neighbourhood of the isthmus of Darien, and can form some sort of a mental picture of the continent at the time of its discovery by Europeans in the fifteenth century. Much more might have been said without going beyond the requirements of an outline sketch, but quite as much has been said as is consistent with the general plan of this book. I have not undertaken at present to go beyond the isthmus of Darien, because this prelim-

inary chapter is already disproportionately long, and after this protracted discussion the reader's attention may be somewhat relieved by an entire change of scene. Enough has been set forth to explain the narrative that follows, and to justify us henceforth in taking certain things for granted. The outline description of Mexico will be completed when we come to the story of its conquest by Spaniards, and then we shall be ready to describe some principal features of Peruvian society and to understand how the Spaniards conquered that country.

The "Mound-Builders."

There is, however, one conspicuous feature of North American antiquity which has not yet received our attention, and which calls for a few words before we close this chapter. I refer to the mounds that are scattered over so large a part of the soil of the United States, and more particularly to those between the Mississippi river and the Alleghany mountains, which have been the subject of so much theorizing, and in late years of so much careful study.[1] Vague

[1] For original researches in the mounds one cannot do better than consult the following papers in the *Reports of the Bureau of Ethnology*: — 1. by W. H. Holmes, "Art in Shell of the Ancient Americans," ii. 181–305; "The Ancient Pottery of the Mississippi Valley," iv. 365–436; "Prehistoric Textile Fabrics of the United States," iii. 397–431; followed by an illustrated catalogue of objects collected chiefly from mounds, iii. 433–515; — 2. H. W. Henshaw, "Animal Carvings from the Mounds of the Mississippi Valley," ii. 121–166; — 3. Cyrus Thomas, "Burial Mounds of the Northern Section of the United States," v. 7–119; also three of the Bureau's "Bulletins" by Dr Thomas, "The Problem of the Ohio Mounds," "The Circular, Square, and Octagonal Earthworks of Ohio," and "Work in Mound Exploration of the Bureau of Ethnology;" also two articles by Dr. Thomas

and wild were the speculations once rife about the "Mound-Builders" and their wonderful civilization. They were supposed to have been a race quite different from the red men, with a culture perhaps superior to our own, and more or less eloquence was wasted over the vanished "empire" of the mound-builders. There is no reason, however, for supposing that there ever was an empire of any sort in ancient North America, and no relic of the past has ever been seen at any spot on our planet which indicates the former existence of a vanished civilization even remotely approaching our own. The sooner the student of history gets his head cleared of all such rubbish, the better. As for the mounds, which are scattered in such profusion over the country west of the Alleghanies, there are some which have been built by In-

in the *Magazine of American History*: — "The Houses of the Mound-Builders," xi. 110–115; "Indian Tribes in Prehistoric Times," xx. 193–201. See also Horatio Hale, "Indian Migrations," in *American Antiquarian*, v. 18–28, 108–124; M. F. Force, *To What Race did the Mound-Builders belong?* Cincinnati, 1875; Lucien Carr, *Mounds of the Mississippi Valley historically considered*, 1883; Nadaillac's *Prehistoric America*, ed. W. H. Dall, chaps. iii., iv. The earliest work of fundamental importance on the subject was Squier's *Ancient Monuments of the Mississippi Valley*, Philadelphia, 1848, being the first volume of the Smithsonian Contributions to Knowledge. — For statements of the theory which presumes either a race connection or a similarity in culture between the mound-builders and the pueblo Indians, see Dawson, *Fossil Men*, p. 55; Foster, *Prehistoric Races of the United States*, Chicago, 1873, chaps. iii., v.–x.; Sir Daniel Wilson, *Prehistoric Man*, chap. x. The annual *Smithsonian Reports* for thirty years past illustrate the growth of knowledge and progressive changes of opinion on the subject. The bibliographical account in Winsor's *Narr. and Crit. Hist.*, i. 397–412, is full of minute information.

dians since the arrival of white men in America, and which contain knives and trinkets of European manufacture. There are many others which are much older, and in which the genuine remains sometimes indicate a culture like that of Shawnees or Senecas, and sometimes suggest something perhaps a little higher. With the progress of research the vast and vague notion of a distinct race of "Mound-Builders" became narrowed and defined. It began to seem probable that the builders of the more remarkable mounds were tribes of Indians who had advanced beyond the average level in horticulture, and consequently in density of population, and perhaps in political and priestly organization. Such a conclusion seemed to be supported by the size of some of the "ancient garden-beds," often covering more than a hundred acres, filled with the low parallel ridges in which corn was planted. The mound people were thus supposed to be semi-civilized red men, like the Aztecs, and some of their elevated earthworks were explained as places for human sacrifice, like the pyramids of Mexico and Central America. It was thought that the "civilization" of the Cordilleran peoples might formerly have extended northward and eastward into the Mississippi valley, and might after a while have been pushed back by powerful hordes of more barbarous invaders. A further modification and reduction of this theory likened the mound-builders to the pueblo Indians of New Mexico. Such was the opinion of Mr. Morgan, who offered a very ingenious explanation of the extensive

The notion that they were like the Aztecs;

earthworks at High Bank, in Ross county, Ohio, as the fortified site of a pueblo.[1] Although there is no reason for supposing that the mound-builders practised irrigation (which would not be required in the Mississippi valley) or used adobe-brick, yet Mr. Morgan was inclined to admit them into his middle status of barbarism because of the copper hatchets and chisels found in some of the mounds, and because of the apparent superiority in horticulture and the increased reliance upon it. He suggested that a people somewhat like the Zuñis might have migrated eastward and modified their building habits to suit the altered conditions of the Mississippi valley, where they dwelt for several centuries, until at last, for some unknown reason, they retired to the Rocky Mountain region. It seems to me that an opinion just the reverse of Mr. Morgan's would be more easily defensible, — namely, that the ancestors of the pueblo Indians were a people of building habits somewhat similar to the Mandans, and that their habits became modified in adaptation to a country which demanded careful irrigation and supplied adobe-clay in abundance. If ever they built any of the mounds in the Mississippi valley, I should be disposed to place their mound-building period before their pueblo period.

or like the Zuñis.

Recent researches, however, make it more and more improbable that the mound-builders were nearly akin to such people as the Zuñis or similar to them in grade of culture. Of late years the ex-

[1] *Houses and House-Life*, chap. ix.

ploration of the mounds has been carried on with increasing diligence. More than 2,000 mounds have been opened, and at least 38,000 ancient relics have been gathered from them: such as quartzite arrow-heads and spades, greenstone axes and hammers, mortars and pestles, tools for spinning and weaving, and cloth, made of spun thread and woven with warp and woof, somewhat like a coarse sail-cloth. The water-jugs, kettles, pipes, and sepulchral urns have been elaborately studied. The net results of all this investigation, up to the present time, have been concisely summed up by Dr. Cyrus Thomas.[1] The mounds were not all built by one people, but by different tribes as clearly distinguishable from one another as Algonquins are distinguishable from Iroquois. These mound-building tribes were not superior in culture to the Iroquois and many of the Algonquins as first seen by white men. They are not to be classified with Zuñis, still less with Mexicans or Mayas, in point of culture, but with Shawnees and Cherokees. Nay more, — some of them *were* Shawnees and Cherokees. The missionary Johann Heckewelder long ago published the Lenape tradition of the Tallegwi or Allighewi people, who have left their name upon the Alleghany river and mountains.[2] The Tallegwi have been identified

The mounds were probably built by different peoples in the lower status of barbarism;

[1] *Work in Mound Exploration of the Bureau of Ethnology*, Washington, 1887. For a sight of the thousands of objects gathered from the mounds, one should visit the Peabody Museum at Cambridge and the Smithsonian Institution at Washington.

[2] Heckewelder, *History of the Indian Nations of Pennsylvania*,

with the Cherokees, who are now reckoned among the most intelligent and progressive of Indian peoples.[1] The Cherokees were formerly classed in the Muskoki group, along with the Creeks and Choctaws, but a closer study of their language seems to show that they were a somewhat remote offshoot of the Huron-Iroquois stock. For a long time they occupied the country between the Ohio river and the Great Lakes, and probably built the mounds that are still to be seen there. Somewhere about the thirteenth or fourteenth century they were gradually pushed southward into the Muskoki region by repeated attacks from the Lenape and Hurons. The Cherokees were probably also the builders of the mounds of eastern Tennessee and western North Carolina. They retained their mound-building habits some time after the white men came upon the scene. On the other hand the mounds and box-shaped stone graves of Kentucky, Tennessee, and northern Georgia were probably the work of Shawnees, and the stone graves in the Delaware valley are to be ascribed to the Lenape. There are many reasons for believing that the mounds of northern Mississippi were constructed by Chickasaws, and the burial tumuli and "effigy mounds" of Wisconsin by Win-

by Cherokees;

and by Shawnees, and other tribes.

etc., Philadelphia, 1818; cf. Squier, *Historical and Mythological Traditions of the Algonquins*, a paper read before the New York Historical Society in June, 1848; also Brinton, *The Lenape and their Legends*, Philadelphia, 1885.

[1] For a detailed account of their later history, see C. C. Royce, "The Cherokee Nation," *Reports of Bureau of Ethnology*, v. 121–378.

nebagos. The Minnitarees and Mandans were also very likely at one time a mound-building people.

If this view, which is steadily gaining ground, be correct, our imaginary race of "Mound-Builders" is broken up and vanishes, and henceforth we may content ourselves with speaking of the authors of the ancient earthworks as "Indians." There were times in the career of sundry Indian tribes when circumstances induced them to erect mounds as sites for communal houses or council houses, medicine-lodges or burial-places; somewhat as there was a period in the history of our own forefathers in England when circumstances led them to build moated castles, with drawbridge and portcullis; and there is no more occasion for assuming a mysterious race of "Mound-Builders" in America than for assuming a mysterious race of "Castle-Builders" in England.

Thus, at whatever point we touch the subject of ancient America, we find scientific opinion tending more and more steadily toward the conclusion that its people and their culture were indigenous. One of the most important lessons impressed upon us by a long study of comparative mythology is that human minds in different parts of the world, but under the influence of similar circumstances, develop similar ideas and clothe them in similar forms of expression. It is just the same with political institutions, with the development of the arts, with social customs,

Society in America at the time of the Discovery had reached stages similar to stages reached by eastern Mediterranean peoples fifty or sixty centuries earlier.

with culture generally. To repeat the remark already quoted from Sir John Lubbock, — and it is well worth repeating, — "Different races in similar stages of development often present more features of resemblance to one another than the same race does to itself in different stages of its history." When the zealous Abbé Brasseur found things in the history of Mexico that reminded him of ancient Egypt, he hastened to the conclusion that Mexican culture was somehow "derived" from that of Egypt. It was natural enough for him to do so, but such methods of explanation are now completely antiquated. Mexican culture was no more Egyptian culture than a prickly-pear is a lotus. It was an outgrowth of peculiar American conditions acting upon the aboriginal American mind, and such of its features as remind us of ancient Egypt or prehistoric Greece show simply that it was approaching, though it had not reached, the standard attained in those Old World countries. From this point of view the resemblances become invested with surpassing interest. Ancient America, as we have seen, was a much more archaic world than the world of Europe and Asia, and presented in the time of Columbus forms of society that on the shores of the Mediterranean had been outgrown before the city of Rome was built. Hence the intense and peculiar fascination of American archæology, and its profound importance to the student of general history.

CHAPTER II.

PRE-COLUMBIAN VOYAGES.

THERE is something solemn and impressive in the spectacle of human life thus going on for countless ages in the Eastern and Western halves of our planet, each all unknown to the other and uninfluenced by it. The contact between the two worlds practically begins in 1492.

By this statement it is not meant to deny that occasional visitors may have come and did come before that famous date from the Old World to the New. On the contrary I am inclined to suspect that there may have been more such occasional visits than we have been wont to suppose. For the most part, however, the subject is shrouded in the mists of obscure narrative and fantastic conjecture. When it is argued that in the fifth century of the Christian era certain Buddhist missionary priests came from China by way of Kamtchatka and the Aleutian islands, and kept on till they got to a country which they called Fusang, and which was really Mexico, one cannot reply that such a thing was necessarily and absolutely impossible; but when other critics assure us that, after all, Fusang was really Japan, perhaps one feels a slight sense of relief.[1] So of

The Chinese.

[1] This notion of the Chinese visiting Mexico was set forth by

the dim whispers of voyages to America undertaken by the Irish, in the days when the cloisters of sweet Innisfallen were a centre of piety and culture for northwestern Europe,[1] we may say that this sort of thing has not much to do with history, or history with it. Irish anchorites certainly went to Iceland in the seventh century,[2] and in the course of this book we shall have frequent occasion to observe that first and last there has been on all seas a good deal of blowing and drifting done. It is credibly reported that Japanese junks have been driven ashore on the

The Irish.

the celebrated Deguignes in 1761, in the *Mémoires de l'Académie des Inscriptions*, tom. xxviii. pp. 506–525. Its absurdity was shown by Klaproth, "Recherches sur le pays de Fou Sang," *Nouvelles annales des voyages*, Paris, 1831, 2e série, tom. xxi. pp. 53–68; see also Klaproth's introduction to *Annales des empereurs du Japon*, Paris, 1834, pp. iv.–ix.; Humboldt, *Examen critique de l'histoire de la géographie du nouveau continent*, Paris, 1837, tom. ii. pp. 62–84. The fancy was revived by C. G. Leland ("Hans Breitmann"), in his *Fusang*, London, 1875, and was again demolished by the missionary, S. W. Williams, in the *Journal of the American Oriental Society*, vol. xi., New Haven, 1881.

[1] On the noble work of the Irish church and its missionaries in the sixth and seventh centuries, see Montalembert, *Les moines d'Occident*, tom. ii. pp. 465–661; tom. iii. pp. 79–332; Burton's *History of Scotland*, vol. i. pp. 234–277, and the instructive map in Miss Sophie Bryant's *Celtic Ireland*, London, 1889, p. 60. The notice of the subject in Milman's *Latin Christianity*, vol. ii. pp. 236–247, is entirely inadequate.

[2] The passion for solitude led some of the disciples of St. Columba to make their way from Iona to the Hebrides, and thence to the Orkneys, Shetlands, Færoes, and Iceland, where a colony of them remained until the arrival of the Northmen in 874. See Dicuil, *Liber de mensura Orbis Terræ* (A. D. 825), Paris, 1807; Innes, *Scotland in the Middle Ages*, p. 101; Lanigan, *Ecclesiastical History of Ireland*, chap. iii.; Maurer, *Beiträge zur Rechtsgeschichte des Germanischen Nordens*, i. 35. For the legend of St. Brandan, see Gaffarel, *Les voyages de St. Brandan*, Paris, 1881.

coasts of Oregon and California;[1] and there is a story that in 1488 a certain Jean Cousin, of Dieppe, while sailing down the west coast of Africa, was caught in a storm and blown across to Brazil.[2] This was certainly quite possible, for it was not so very unlike what happened in 1500 to Pedro Alvarez de Cabral, as we shall hereafter see;[3] nevertheless, the evidence adduced in support of the story will hardly bear a critical examination.[4]

Cousin, of Dieppe.

It is not my purpose to weary the reader with a general discussion of these and some other legends or rumours of pre-Columbian visitors to America. We may admit, at once, that "there is no good reason why any one of them may not have done" what is claimed, but at the same time the proof that any one of them *did* do it is very far from satisfactory.[5] Moreover the questions raised are often of small importance, and belong not so much to the serious workshop of history as to its limbo prepared for learned trifles, whither we will hereby relegate them.[6]

These stories are of little value;

[1] C. W. Brooks, of San Francisco, cited in Higginson, *Larger History of the United States*, p. 24.

[2] Desmarquets, *Mémoires chronologiques pour servir à l'histoire de Dieppe*, Paris, 1785, tom. i. pp. 91–98; Estancelin, *Recherches sur les voyages et découvertes des navigateurs normands*, etc., Paris, 1832, pp. 332–361.

[3] See below, vol. ii. p. 96.

[4] As Harrisse says, conçerning the alleged voyages of Cousin and others, "Quant aux voyages du Dieppois Jean Cousin en 1488, de João Ramalho en 1490, et de João Vaz Cortereal en 1464 ou 1474, le lecteur nous pardonnera de les passer sous silence." *Christophe Colomb*, Paris, 1884, tom. i. p. 307.

[5] Winsor, *Narr. and Crit. Hist.*, i. 59.

[6] Sufficiently full references may be found in Watson's *Bibli-*

but the case of the Northmen is entirely different.

But when we come to the voyages of the Northmen in the tenth and eleventh centuries, it is quite a different affair. Not only is this a subject of much historic interest, but in dealing with it we stand for a great part of the time upon firm historic ground. The narratives which tell us of Vinland and of Leif Ericsson are closely intertwined with the authentic history of Norway and Iceland. In the ninth century of our era there was a process of political consolidation going on in Norway, somewhat as in England under Egbert and his successors. After a war of twelve years, King Harold Fairhair overthrew the combined forces of the Jarls, or small independent princes, in the decisive naval battle of Hafursfiord in the year 872. This resulted in making Harold the feudal landlord of Norway. Allodial tenures were abolished, and the Jarls were required to become his vassals. This consolidation of the kingdom was probably beneficial in its main consequences, but to many a proud spirit and crafty brain it made life in Norway unendurable. These bold Jarls and their Viking[1] followers, to whom,

The Viking exodus from Norway.

ography of the Pre-Columbian Discoveries of America, appended to Anderson's *America not discovered by Columbus*, 3d ed., Chicago, 1883, pp. 121–164; and see the learned chapters by W. H. Tillinghast on "The Geographical Knowledge of the Ancients considered in relation to the Discovery of America," and by Justin Winsor on "Pre-Columbian Explorations," in *Narr. and Crit. Hist.*, vol. i.

[1] The proper division of this Old Norse word is not into *vī-king*, but into *vīk-ing*. The first syllable means a "bay" or "fiord," the second is a patronymic termination, so that "vikings" are "sons of the fiord," — an eminently appropriate and descriptive name.

as to the ancient Greeks, the sea was not a barrier, but a highway,[1] had no mind to stay at home and submit to unwonted thraldom. So they manned their dragon-prowed keels, invoked the blessing of Wodan, god of storms, upon their enterprise, and sailed away. Some went to reinforce their kinsmen who were making it so hot for Alfred in England[2] and for Charles the Bald in Gaul; some had already visited Ireland and were establishing themselves at Dublin and Limerick; others now followed and found homes for themselves in the Hebrides and all over Scotland north of glorious Loch Linnhe and the Murray frith; some made their way through the blue Mediterranean to "Micklegard," the Great City of the Byzantine Emperor, and in his service wielded their stout axes against Magyar and Saracen;[3] some found their amphibious natures better satisfied upon the islands of the Atlantic ridge, — the Orkneys, Shetlands,

[1] Curtius (*Griechische Etymologie*, p. 237) connects πόντος with πάτος; compare the Homeric expressions ὑγρὰ κέλευθα, ἰχθυόεντα κέλευθα, etc.

[2] The descendants of these Northmen formed a very large proportion of the population of the East Anglian counties, and consequently of the men who founded New England. The East Anglian counties have been conspicuous for resistance to tyranny and for freedom of thought. See my *Beginnings of New England*, p. 62.

[3] They were the Varangian guard at Constantinople, described by Sir Walter Scott in *Count Robert of Paris*. About this same time their kinsmen, the Russ, moving eastward from Sweden, were subjecting Slavic tribes as far as Novgorod and Kief, and laying the foundations of the power that has since, through many and strange vicissitudes, developed into Russia. See Thomsen, *The Relations between Ancient Russia and Scandinavia*, Oxford, 1877.

and Færoes, and especially noble Iceland. There an aristocratic republic soon grew up, owning slight and indefinite allegiance to the kings of Norway.[1] The settlement of Iceland was such a wholesale colonization of communities of picked men as had not been seen since ancient Greek times, and was not to be seen again until Winthrop sailed into Massachusetts Bay. It was not long before the population of Iceland exceeded 50,000 souls. Their sheep and cattle flourished, hay crops were heavy, a lively trade — with fish, oil, butter, skins, and wool, in exchange for meal and malt — was kept up with Norway, Denmark, and the British islands, political freedom was unimpaired,[2] justice was (for

Founding of Iceland, A. D. 874.

[1] Fealty to Norway was not formally declared until 1262.

[2] The settlement of Iceland is celebrated by Robert Lowe in verses which show that, whatever his opinion may have been in later years as to the use of a classical education, his own early studies must always have been a source of comfort to him: —

Χαῖρε καί ἐν νεφέλαισι καί ἐν νιφάδεσσι βαρείαις
Καὶ πυρὶ καὶ σεισμοῖς νῆσε σαλευομένη·
Ἐνθάδε γὰρ βασιλῆος ὑπέρβιον ὕβριν ἀλύξας
Δῆμος Ὑπερβορέων, κόσμου ἔπ' ἐσχατιῇ,
Αὐτάρκη βίοτον θείων τ' ἐρεθίσματα Μουσῶν
Καὶ θεσμοὺς ἀγνῆς εὗρεν ἐλευθερίας.

These verses are thus rendered by Sir Edmund Head (*Viga Glums Saga*, p. v.): —

"Hail, Isle! with mist and snowstorms girt around,
Where fire and earthquake rend the shattered ground, —
Here once o'er furthest ocean's icy path
The Northmen fled a tyrant monarch's wrath:
Here, cheered by song and story, dwelt they free,
And held unscathed their laws and liberty."

Laing (*Heimskringla*, vol. i. p. 57) couples Iceland and New England as the two modern colonies most distinctly "founded on principle and peopled at first from higher motives than want or gain."

the Middle Ages) fairly well administered, naval superiority kept all foes at a distance; and under such conditions the growth of the new community in wealth[1] and culture was surprisingly rapid. In the twelfth century, before literature had begun to blossom in the modern speech of France or Spain or Italy, there was a flourishing literature in prose and verse in Iceland. Especial attention was paid to history, and the "Landnáma-bók," or statistical and genealogical account of the early settlers, was the most complete and careful work of the kind which had ever been undertaken by any people down to quite recent times. Few persons in our day adequately realize the extent of the early Icelandic literature or its richness. The poems, legends, and histories earlier than the date when Dante walked and mused in the streets of Florence survive for us now in some hundreds of works, for the most part of rare and absorbing interest. The "Heimskringla," or chronicle of Snorro Sturleson, written about 1215, is one of the greatest history books in the world.[2]

[1] Just what was then considered wealth, for an individual, may best be understood by a concrete instance. The historian Snorro Sturleson, born in 1178, was called a rich man. "In one year, in which fodder was scarce, he lost 120 head of oxen without being seriously affected by it." The fortune which he got with his first wife Herdisa, in 1199, was equivalent nominally to $4,000, or, according to the standard of to-day, about $80,000. Laing, *Heimskringla*, vol. i. pp. 191, 193.

[2] Laing's excellent English translation of it was published in London in 1844. The preliminary dissertation, in five chapters, is of great value. A new edition, revised by Prof. Rasmus Anderson, was published in London in 1889. Another charming book is Sir George Dasent's *Story of Burnt Njal*, Edinburgh,

Now from various Icelandic chronicles [1] we learn that in 876, only two years after the island com-

1861, 2 vols., translated from the *Njals Saga*. Both the saga itself and the translator's learned introduction give an admirable description of life in Iceland at the end of the tenth century, the time when the voyages to America were made. It is a very instructive chapter in history.

The Icelanders of the present day retain the Old Norse language, while on the Continent it has been modified into Swedish and Norwegian-Danish. They are a well-educated people, and, in proportion to their numbers, publish many books.

[1] A full collection of these chronicles is given in Rafn's *Antiquitates Americanæ*, Copenhagen, 1837, in the original Icelandic, with Danish and Latin translations. This book is of great value for its full and careful reproduction of original texts; although the rash speculations and the want of critical discernment shown in the editor's efforts to determine the precise situation of Vinland have done much to discredit the whole subject in the eyes of many scholars. That is, however, very apt to be the case with first attempts, like Rafn's, and the obvious defects of his work should not be allowed to blind us to its merits. In the footnotes to the present chapter I shall cite it simply as "Rafn;" as the exact phraseology is often important, I shall usually cite the original Icelandic, and (for the benefit of readers unfamiliar with that language) shall also give the Latin version, which has been well made, and quite happily reflects the fresh and pithy vigour of the original. An English translation of all the essential parts may be found in De Costa, *Pre-Columbian Discovery of America by the Northmen*, 2d ed., Albany, 1890; see also Slafter, *Voyages of the Northmen to America*, Boston, 1877 (Prince Society). An Icelandic version, interpolated in Peringskiold's edition of the *Heimskringla*, 1697, is translated in Laing, vol. iii. pp. 344–361.

The first modern writer to call attention to the Icelandic voyages to Greenland and Vinland was Arngrim Jónsson, in his *Crymogæa*, Hamburg, 1610, and more explicitly in his *Specimen Islandiæ historicum*, Amsterdam, 1643. The voyages are also mentioned by Campanius, in his *Kort beskrifning om provincien Nya Swerige uti America*, Stockholm, 1702. The first, however, to bring the subject prominently before European readers was that judicious scholar Thormodus Torfæus, in his two books *Historia Vinlandiæ antiquæ*, and *Historia Gronlandiæ antiquæ*, Co-

monwealth was founded, one of the settlers named Gunnbjörn was driven by foul weather to some point on the coast of Greenland, where he and his crew contrived to pass the winter, their ship being locked in ice;

Discovery of Greenland, 876.

penhagen, 1705 and 1706. Later writers have until very recently added but little that is important to the work of Torfæus. In the voluminous literature of the subject the discussions chiefly worthy of mention are Forster's *Geschichte der Entdeckungen und Schifffahrten im Norden*, Frankfort, 1784, pp. 44–88; and Humboldt, *Examen critique*, etc., Paris, 1837, tom. i. pp. 84–104; see, also, Major, *Select Letters of Columbus*, London, 1847 (Hakluyt Soc.) pp. xii.–xxi. The fifth chapter of Samuel Laing's preliminary dissertation to the *Heimskringla*, which is devoted to this subject, is full of good sense; for the most part the shrewd Orkneyman gets at the core of the thing, though now and then a little closer knowledge of America would have been useful to him. The latest critical discussion of the sources, marking a very decided advance since Rafn's time, is the paper by Gustav Storm, professor of history in the University of Christiania, "Studier over Vinlandsreiserne," in *Aarbøger for Nordisk Oldkyndighed og Historie*, Copenhagen, 1887, pp. 293–372.

Since this chapter was written I have seen an English translation of the valuable paper just mentioned, "Studies on the Vineland Voyages," in *Mémoires de la société royale des antiquaires du Nord*, Copenhagen, 1888, pp. 307–370. I have therefore in most cases altered my footnote references below, making the page-numbers refer to the English version (in which, by the way, some parts of the Norwegian original are, for no very obvious reason, omitted). By an odd coincidence there comes to me at the same time a book fresh from the press, whose rare beauty of mechanical workmanship is fully equalled by its intrinsic merit, *The Finding of Wineland the Good — the History of the Icelandic Discovery of America*, edited and translated from the earliest records by Arthur Middleton Reeves, London, 1890. This beautiful quarto contains phototype plates of the original Icelandic vellums in the *Hauks-bók*, the MS. AM. 557, and the *Flateyar-bók*, together with the texts carefully edited, an admirable English translation, and several chapters of critical discussion decidedly better than anything that has gone before it. On

when the spring set them free, they returned to Iceland. In the year 983 Eric the Red, a settler upon Öxney (Ox-island) near the mouth of Breidafiord, was outlawed for killing a man in a brawl. Eric then determined to search for the western land which Gunnbjörn had discovered. He set out with a few followers, and in the next three years these bold sailors explored the coasts of Greenland pretty thoroughly for a considerable distance on each side of Cape Farewell. At length they found a suitable place for a home, at the head of Igaliko fiord, not far from the site of the modern Julianeshaab.[1] It was fit work for Vikings to penetrate so deep a fiord and find out such a spot, hidden as it is by miles upon miles of craggy and ice-covered headlands. They proved their sagacity by pitching upon one of the pleasantest spots on the gaunt Greenland coast; and there upon a smooth grassy plain may still be seen the ruins of seventeen houses built of rough blocks of sandstone, their chinks caulked up with clay and gravel. In contrast with most of its bleak surroundings the place might well be called Greenland, and so Eric named it, for, said he, it is well to have a pleasant name if we would induce people to come hither. The name thus given by Eric to this chosen spot has

Eric's colony in Greenland, 986.

reading it carefully through, it seems to me the best book we have on the subject in English, or perhaps in any language.

Since the above was written, the news has come of the sudden and dreadful death of Mr. Reeves, in the railroad disaster at Hagerstown, Indiana, February 25, 1891. Mr. Reeves was an American scholar of most brilliant promise, only in his thirty-fifth year.

[1] Rink, *Danish Greenland*, p. 6.

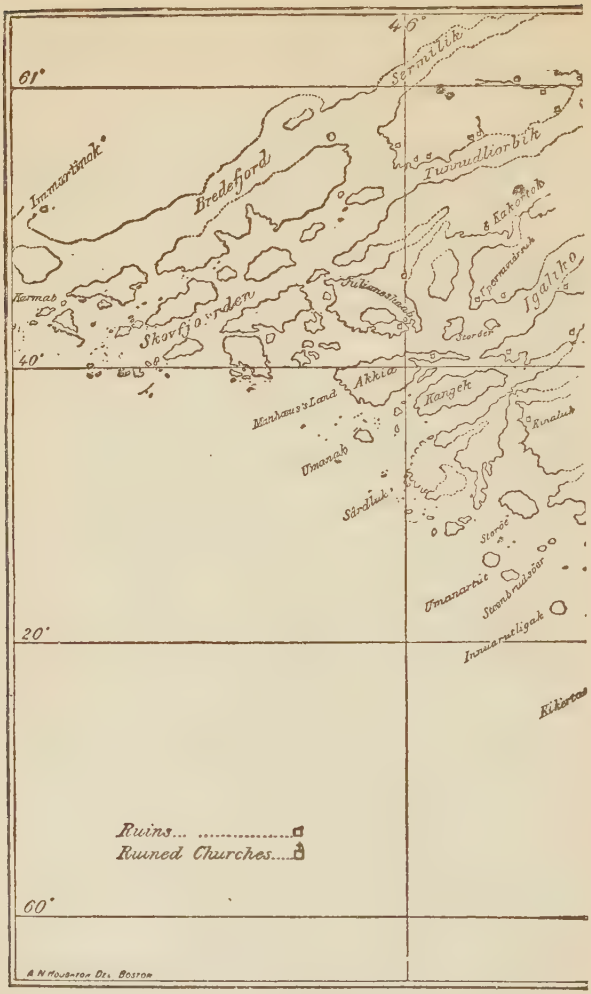
been extended in modern usage to the whole of the vast continental region north of Davis strait, for the greater part of which it is a flagrant misnomer.[1] In 986 Eric ventured back to Iceland, and was so successful in enlisting settlers for Greenland that on his return voyage he started with five and twenty ships. The loss from foul weather and icebergs was cruel. Eleven vessels were lost; the remaining fourteen, carrying probably from four to five hundred souls, arrived safely at the head of Igaliko fiord, and began building their houses at the place called Brattahlid. Their settlement presently extended over the head of Tunnudliorbik fiord, the next deep inlet to the northwest; they called it Ericsfiord. After a while it extended westward as far as Immartinek, and eastward as far as the site of Friedrichsthal; and another distinct settlement of less extent was also made about four hundred miles to the northwest, near the present site of Godthaab. The older settlement, which began at Igaliko fiord, was known as the East Bygd;[2] the younger settlement, near Godthaab, was called the West Bygd.

[1] We thus see the treacherousness of one of the arguments cited by the illustrious Arago to prove that the Greenland coast must be colder now than in the tenth century. The Icelanders, he thinks, called it "a green land" because of its verdure, and therefore it must have been warmer than at present. But the land which Eric called green was evidently nothing more than the region about Julianeshaab, which still has plenty of verdure; and so the argument falls to the ground. See Arago, *Sur l'état thermométrique du globe terrestre*, in his *Œuvres*, tom. v. p. 243. There are reasons, however, for believing that Greenland was warmer in the tenth century than at present. See below, p. 176.

[2] The map is reduced from Rafn's *Antiquitates Americanæ*, tab. xv. The ruins dotted here and there upon it have been known

This colonization of Greenland by the Northmen in the tenth century is as well established as any event that occurred in the Middle Ages. For four hundred years the fortunes of the Greenland colony formed a part, albeit a very humble part, of European history. Geographically speaking, Greenland is reckoned as a part of America, of

ever since the last rediscovery of Greenland in 1721, but until after 1831 they were generally supposed to be the ruins of the West Bygd. After the fifteenth century, when the old colony had perished, and its existence had become a mere literary tradition, there grew up a notion that the names East Bygd and West Bygd indicated that the two settlements must have been respectively eastward and westward of Cape Farewell; and after 1721 much time was wasted in looking for vestiges of human habitations on the barren and ice-bound eastern coast. At length, in 1828–31, the exploring expedition sent out by the Danish government, under the very able and intelligent Captain Graah, demonstrated that both settlements were west of Cape Farewell, and that the ruins here indicated upon the map are the ruins of the East Bygd. It now became apparent that a certain description of Greenland by Ivar Bardsen — written in Greenland in the fourteenth century, and generally accessible to European scholars since the end of the sixteenth, but not held in much esteem before Captain Graah's expedition — was quite accurate and extremely valuable. From Bardsen's description, about which we shall have more to say hereafter, we can point out upon the map the ancient sites with much confidence. Of those mentioned in the present work, the bishop's church, or "cathedral" (a view of which is given below, p. 222), was at Kakortok. The village of Gardar, which gave its name to the bishopric, was at Kaksiarsuk, at the northeastern extremity of Igaliko fiord. Opposite Kaksiarsuk, on the western fork of the fiord, the reader will observe a ruined church; that marks the site of Brattahlid. The fiord of Igaliko was called by the Northmen Einarsfiord; and that of Tunnudliorbik was their Eriesfiord. The monastery of St. Olaus, visited by Nicolò Zeno (see below, p. 240), is supposed by Mr. Major to have been situated near the Iisblink at the bottom of Tesserniut fiord, between the east shore of the fiord and the small lake indicated on the map.



The East Bygd, or Eastern Settlement

of the Northmen in Greenland.

the western hemisphere, and not of the eastern. The Northmen who settled in Greenland had, therefore, in this sense found their way to America. Nevertheless one rightly feels that in the history of geographical discovery an arrival of Europeans in Greenland is equivalent merely to reaching the vestibule or ante-chamber of the western hemisphere. It is an affair begun and ended outside of the great world of the red men.

But the story does not end here. Into the world of the red men the voyagers from Iceland did assuredly come, as indeed, after once getting a foothold upon Greenland, they could hardly fail to do. Let us pursue the remainder of the story as we find it in our Icelandic sources of information, and afterwards it will be proper to inquire into the credibility of these sources.

One of the men who accompanied Eric to Greenland was named Herjulf, whose son Bjarni, after roving the seas for some years, came home to Iceland in 986 to drink the Yuletide ale with his father. Finding him gone, he weighed anchor and started after him to Greenland, but encountered foggy weather, and sailed on for many days by guess-work without seeing sun or stars. When at length he sighted land it was a shore without mountains, showing only small heights covered with dense woods. It was evidently not the land of fiords and glaciers for which Bjarni was looking. So without stopping to make explorations he turned his prow to the north and kept on. The sky was now fair, and after scudding nine or ten days with a brisk breeze

Voyage of Bjarni Herjulfson, 986.

astern, Bjarni saw the icy crags of Greenland looming up before him, and after some further searching found his way to his father's new home.[1] On the route he more than once sighted land on the larboard.

This adventure of Bjarni's seems not to have excited general curiosity or to have awakened speculation. Indeed, in the dense geographical ignorance of those times there is no reason why it should have done so. About 994 Bjarni was in Norway, and one or two people expressed some surprise that he did not take more pains to learn something about the country he had seen; but nothing came of such talk till it reached the ears of Leif, the famous son of Eric the Red. This wise and stately man[2] spent a year or two in Norway about 998. Roman missionary priests were then preaching up and down the land, and had converted the king, Olaf Tryggvesson, great-grandson of Harold Fairhair. Leif became a Christian and was baptised, and when he returned to Greenland he took priests with him who converted many people, though old Eric, it is said, preferred to go in the way of his fathers, and deemed boisterous Valhalla, with its cups of wassail, a place of better cheer than the New Jerusalem, with its streets of gold.

Conversion of the Northmen to Christianity.

[1] In Herjulfsfiord, at the entrance to which the modern Friedrichsthal is situated. Across the fiord from Friedrichsthal a ruined church stands upon the cape formerly known as Herjulfsness. See map.

[2] "Leifr var mikill madhr ok sterkr, manna sköruligastr at sjá, vitr madhr ok gódhr hófsmadhr um alla hluti." i. e. "Leif was a large man and strong, of noble aspect, prudent and moderate in all things." Rafn, p. 33.

Leif's zeal for the conversion of his friends in Greenland did not so far occupy his mind as to prevent him from undertaking a voyage of discovery. His curiosity had been stimulated by what he had heard about Bjarni's experiences, and he made up his mind to go and see what the coasts to the south of Greenland were like. He sailed from Brattahlid — probably in the summer or early autumn of the year 1000 [1] — with a crew of five and thirty men. Some distance to the southward they came upon a barren country covered with big flat stones, so that they called it Helluland, or "slate-land." There is little room for doubt that this was the coast opposite Greenland, either west or east of the strait of Belle Isle; in other words, it was either Labrador or the northern coast of Newfoundland. Thence, keeping generally to the southward, our explorers came after some days to a thickly wooded coast, where they landed and inspected the country. What chiefly impressed them was the extent of the forest, so that they called the place Markland, or "wood-land." Some critics have supposed that this spot was somewhere upon the eastern or southern coast of Newfoundland, but the more general

Leif Ericsson's voyage, 1000.

Helluland.

Markland.

[1] The year seems to have been that in which Christianity was definitely established by law in Iceland, viz., A. D. 1000. The chronicle *Thattr Eireks Raudha* is careful about verifying its dates by checking one against another. See Rafn, p. 15. The most masterly work on the conversion of the Scandinavian people is Maurer's *Die Bekehrung des Norwegischen Stammes zum Christenthume*, Munich, 1855; for an account of the missionary work in Iceland and Greenland, see vol. i. pp. 191–242, 443–452.

opinion places it somewhere upon the coast of Cape Breton island or Nova Scotia. From this Markland our voyagers stood out to sea, and running briskly before a stiff northeaster it was more than two days before they came in sight of land. Then, after following the coast for a while, they went ashore at a place where a river, issuing from a lake, fell into the sea. They brought their ship up into the lake and cast anchor. The water abounded in excellent fish, and the country seemed so pleasant that Leif decided to pass the winter there, and accordingly his men put up some comfortable wooden huts or booths. One day one of the party, a "south country" man, whose name was Tyrker,[1] came in from a ramble in the neighbourhood making grimaces and talking to himself in his own language (probably German), which his comrades did not understand. On being interrogated as to the cause of his

Vinland.

[1] The name means "Turk," and has served as a touchstone for the dullness of commentators. To the Northmen a "Southman" would naturally be a German, and why should a German be called a Turk? or how should these Northmen happen to have had a Turk in their company? Mr. Laing suggests that he may have been a Magyar. Yes; or he may have visited the Eastern Empire and taken part in a fight *against* Turks, and so have got a soubriquet, just as Thorhall Gamlason, after returning from Vinland to Iceland, was ever afterward known as "the Vinlander." That did not mean that he was an American redskin. See below, p. 203. From Tyrker's grimaces one commentator sagely infers that he had been eating grapes and got drunk; and another (even Mr. Laing!) thinks it necessary to remind us that all the grape-juice in Vinland would not fuddle a man unless it had been fermented, — and then goes on to ascribe the absurdity to our innocent chronicle, instead of the stupid annotator. See *Heimskringla*, vol. i. p. 168.

excitement, he replied that he had discovered vines loaded with grapes, and was much pleased at the sight inasmuch as he had been brought up in a vine country. Wild grapes, indeed, abounded in this autumn season, and Leif accordingly called the country Vinland. The winter seems to have passed off very comfortably. Even the weather seemed mild to these visitors from high latitudes, and they did not fail to comment on the unusual length of the winter day. Their language on this point has been so construed as to make the length of the shortest winter day exactly nine hours, which would place their Vinland in about the latitude of Boston. But their expressions do not admit of any such precise construction; and when we remember that they had no accurate instruments for measuring time, and that a difference of about fourteen minutes between sunrise and sunset on the shortest winter day would make all the difference between Boston and Halifax, we see how idle it is to look for the requisite precision in narratives of this sort, and to treat them as one would treat the reports of a modern scientific exploring expedition.

In the spring of 1001 Leif returned to Greenland with a cargo of timber.[1] The voyage made much talk. Leif's brother Thorvald caught the

[1] On the homeward voyage he rescued some shipwrecked sailors near the coast of Greenland, and was thenceforward called Leif the Lucky (et postea cognominatus est Leivus Fortunatus). The pleasant reports from the newly found country gave it the name of "Vinland the Good." In the course of the winter following Leif's return his father died.

inspiration,[1] and, borrowing Leif's ship, sailed in 1002, and succeeded in finding Vinland and Leif's huts, where his men spent two winters. In the intervening summer they went on an exploring expedition along the coast, fell in with some savages in canoes, and got into a fight in which Thorvald was killed by an arrow. In the spring of 1004 the ship returned to Brattahlid. Next year the third brother, Thorstein Ericsson, set out in the same ship, with his wife Gudrid and a crew of thirty-five men; but they were sore bestead with foul weather, got nowhere, and accomplished nothing. Thorstein died on the voyage, and his widow returned to Greenland.

Voyages of Thorvald and Thorstein, 1002–05.

In the course of the next summer, 1006, there came to Brattahlid from Iceland a notable personage, a man of craft and resource, wealthy withal and well born, with the blood of many kinglets or jarls flowing in his veins. This man, Thorfinn Karlsefni, straightway fell in love with the young and beautiful widow Gudrid, and in the course of the winter there was a merry wedding at Brattahlid. Persuaded by his adventurous bride, whose spirit had been roused by the reports from Vinland and by her former unsuccessful attempt to find it, Thorfinn now undertook to visit that country in force sufficient for founding a colony there. Accordingly in the spring of 1007 he

Thorfinn Karlsefni, and his unsuccessful attempt to found a colony in Vinland, 1007–10.

[1] "Jam crebri de Leivi in Vinlandiam profectione sermones serebantur. Thorvaldus vero, frater ejus, nimis pauca terræ loca explorata fuisse judicavit." Rafn, p. 39.

started with three or four ships,[1] carrying one hundred and sixty men, several women, and quite a cargo of cattle. In the course of that year his son Snorro was born in Vinland,[2] and our chronicle tells us that this child was three years old before the disappointed company turned their backs upon that land of promise and were fain to make their way homeward to the fiords of Greenland. It was the hostility of the natives that compelled Thorfinn to abandon his enterprise. At first they traded with him, bartering valuable furs for little strips of scarlet cloth which they sought most eagerly; and they were as terribly frightened by his cattle as the Aztecs were in later days by the Spanish horses.[3] The chance bellowing of a bull sent them squalling to the woods, and they did not show themselves again for three weeks. After a while quarrels arose, the natives attacked in

[1] Three is the number usually given, but at least four of their ships would be needed for so large a company; and besides Thorfinn himself, three other captains are mentioned, — Snorro Thorbrandsson, Bjarni Grimolfsson, and Thorhall Gamlason. The narrative gives a picturesque account of this Thorhall, who was a pagan and fond of deriding his comrades for their belief in the new-fangled Christian notions. He seems to have left his comrades and returned to Europe before they had abandoned their enterprise. A further reference to him will be made below, p. 203.

[2] To this boy Snorro many eminent men have traced their ancestry, — bishops, university professors, governors of Iceland, and ministers of state in Norway and Denmark. The learned antiquarian Finn Magnùsson and the celebrated sculptor Thorwaldsen regarded themselves as thus descended from Thorfinn Karlsefni.

[3] Compare the alarm of the Wampanoag Indians in 1603 at the sight of Martin Pring's mastiff. Winsor, *Narr. and Crit. Hist*, iii. 174.

great numbers, many Northmen were killed, and in 1010 the survivors returned to Greenland with a cargo of timber and peltries. On the way thither the ships seem to have separated, and one of them, commanded by Bjarni Grimolfsson, found itself bored by worms (the *teredo*) and sank, with its commander and half the crew.[1]

Among Karlsefni's companions on this memorable expedition was one Thorvard, with his wife Freydis, a natural daughter of Eric the Red. About the time of their return to Greenland in the summer of 1010, a ship arrived from Norway, commanded by two brothers, Helgi and Finnbogi.

[1] The fate of Bjarni was pathetic and noble. It was decided that as many as possible should save themselves in the stern boat. "Then Bjarni ordered that the men should go in the boat by lot, and not according to rank. As it would not hold all, they accepted the saying, and when the lots were drawn, the men went out of the ship into the boat. The lot was that Bjarni should go down from the ship to the boat with one half of the men. Then those to whom the lot fell went down from the ship to the boat. When they had come into the boat, a young Icelander, who was the companion of Bjarni, said: 'Now thus do you intend to leave me, Bjarni?' Bjarni replied, 'That now seems necessary.' He replied with these words: 'Thou art not true to the promise made when I left my father's house in Iceland.' Bjarni replied: 'In this thing I do not see any other way'; continuing, 'What course can you suggest?' He said: 'I see this, that we change places and thou come up here and I go down there.' Bjarni replied: 'Let it be so, since I see that you are so anxious to live, and are frightened by the prospect of death.' Then they changed places, and he descended into the boat with the men, and Bjarni went up into the ship. It is related that Bjarni and the sailors with him in the ship perished in the worm sea. Those who went in the boat went on their course until they came to land, where they told all these things." De Costa's version from *Saga Thorfinns Karlsefnis*, Rafn, pp. 184–186.

During the winter a new expedition was planned, and in the summer of 1011 two ships set sail for Vinland, one with Freydis, Thorvard, and a crew of 30 men, the other with Helgi and Finnbogi, and a crew of 35 men. There were also a number of women. The purpose was not to found a colony but to cut timber. The brothers arrived first at Leif's huts and had begun carrying in their provisions and tools, when Freydis, arriving soon afterward, ordered them off the premises. They had no right, she said, to occupy her brother's houses. So they went out and built other huts for their party a little farther from the shore. Before their business was accomplished "winter set in, and the brothers proposed to have some games for amusement to pass the time. So it was done for a time, till discord came among them, and the games were given up, and none went from one house to the other; and things went on so during a great part of the winter." At length came the catastrophe. Freydis one night complained to her husband that the brothers had given her evil words and struck her, and insisted that he should forthwith avenge the affront. Presently Thorvard, unable to bear her taunts, was aroused to a deed of blood. With his followers he made a night attack upon the huts of Helgi and Finnbogi, seized and bound all the occupants, and killed the men one after another in cold blood. Five women were left whom Thorvard would have spared; as none of his men would raise a hand against them, Freydis herself took an axe and brained them one and all. In the spring

Freydis, and her evil deeds in Vinland, 1011–12.

of 1012 the party sailed for Brattahlid in the ship of the murdered brothers, which was the larger and better of the two. Freydis pretended that they had exchanged ships and left the other party in Vinland. With gifts to her men, and dire threats for any who should dare tell what had been done, she hoped to keep them silent. Words were let drop, however, which came to Leif's ears, and led him to arrest three of the men and put them to the torture until they told the whole story. "'I have not the heart,' said Leif, 'to treat my wicked sister as she deserves; but this I will foretell them [Freydis and Thorvard] that their posterity will never thrive.' So it went that nobody thought anything of them save evil from that time."

With this grewsome tale ends all account of Norse attempts at exploring or colonizing Vinland, though references to Vinland by no means end here.[1] Taking the narrative as a whole, it seems to me a sober, straightforward, and eminently probable story. We may not be able to say with confidence exactly where such places as Markland and Vinland were, but it is clear that the coasts visited on these southerly and southwesterly voyages from Brattahlid must have been parts of the coast of North America, unless the whole story is to be dismissed as a figment of somebody's imagination. But for a figment of the imagination, and of European

The whole story is eminently probable.

[1] The stories of Gudleif Gudlaugsson and Ari Marsson, with the fanciful speculations about "Hvitramannaland" and "Irland it Mikla," do not seem worthy of notice in this connection. They may be found in De Costa, *op. cit.* pp. 159–177; and see Reeves, *The Finding of Wineland the Good*, chap. v.

imagination withal, it has far too many points of verisimilitude, as I shall presently show.

In the first place, it is an extremely probable story from the time that Eric once gets settled in Brattahlid. The founding of the Greenland colony is the only strange or improbable part of the narrative, but that is corroborated in so many other ways that we know it to be true; as already observed, no fact in mediæval history is better established. When I speak of the settlement of Greenland as strange, I do not mean that there is anything strange in the Northmen's accomplishing the voyage thither from Iceland. That island is nearer to Greenland than to Norway, and we know, moreover, that Norse sailors achieved more difficult things than penetrating the fiords of southern Greenland. Upon the island of Kingitorsook in Baffin's Bay (72° 55′ N., 56° 5′ W.) near Upernavik, in a region supposed to have been unvisited by man before the modern age of Arctic exploration, there were found in 1824 some small artificial mounds with an inscription upon stone: — "Erling Sighvatson and Bjarni Thordharson and Eindrid Oddson raised these marks and cleared ground on Saturday before Ascension Week, 1135." That is to say, they took symbolic possession of the land.[1]

Voyage into Baffin's Bay, 1135.

In order to appreciate how such daring voyages were practicable, we must bear in mind that the Viking "ships" were probably stronger and more seaworthy, and certainly much swifter, than the Spanish vessels of the time of Columbus. One

[1] Laing, *Heimskringla*, i. 152.

was unearthed a few years ago at Sandefiord in Norway, and may be seen at the museum in Christiania. Its pagan owner had been buried in it, and his bones were found amidships, along with the bones of a dog and a peacock, a few iron fish-hooks and other articles. Bones of horses and dogs, probably sacrificed at the funeral according to the ancient Norse custom, lay scattered about. This craft has been so well described by Colonel Higginson,[1] that I may as well quote the passage in full: —

A Viking ship discovered at Sandefiord, in Norway.

She "was seventy-seven feet eleven inches at the greatest length, and sixteen feet eleven inches at the greatest width, and from the top of the keel to the gunwale amidships she was five feet nine inches deep. She had twenty ribs, and would draw less than four feet of water. She was clinker-built; that is, had plates slightly overlapped, like the shingles on the side of a house. The planks and timbers of the frame were fastened together with withes made of roots, but the oaken boards of the side were united by iron rivets firmly clinched. The bow and stern were similar in shape, and must have risen high out of water, but were so broken that it was impossible to tell how they originally ended. The keel was deep and made of thick oak beams, and there was no trace of any metallic sheathing; but an iron anchor was found almost rusted to pieces. There was no deck and the seats for rowers had been taken out. The oars were twenty feet long, and the oar-holes, sixteen on each side, had slits sloping towards the

Description of the ship.

[1] See his *Larger History of the United States*, pp. 32–34.

stern to allow the blades of the oars to be put through from inside. The most peculiar thing about the ship was the rudder, which was on the starboard or right side, this side being originally called 'steerboard' from this circumstance. The rudder was like a large oar, with long blade and short handle, and was attached, not to the side of the boat, but to the end of a conical piece of wood which projected almost a foot from the side of the vessel, and almost two feet from the stern. This piece of wood was bored down its length, and no doubt a rope passing through it secured the rudder to the ship's side. It was steered by a tiller attached to the handle, and perhaps also by a rope fastened to the blade. As a whole, this disinterred vessel proved to be anything but the rude and primitive craft which might have been expected; it was neatly built and well preserved, constructed on what a sailor would call beautiful lines, and eminently fitted for sea service. Many such vessels may be found depicted on the celebrated Bayeux tapestry; and the peculiar position of the rudder explains the treaty mentioned in the Heimskringla, giving to Norway all lands lying west of Scotland between which and the mainland a vessel could pass with her rudder shipped. . . . This was not one of the very largest ships, for some of them had thirty oars on each side, and vessels carrying from twenty to twenty-five were not uncommon. The largest of these were called Dragons, and other sizes were known as Serpents or Cranes. The ship itself was often so built as to represent the name it bore: the dragon, for instance, was a

long low vessel, with the gilded head of a dragon at the bow, and the gilded tail at the stern; the moving oars at the side might represent the legs of the imaginary creature, the row of shining red and white shields that were hung over the gunwale looked like the monster's scales, and the sails striped with red and blue might suggest his wings. The ship preserved at Christiania is described as having had but a single mast, set into a block of wood so large that it is said no such block could now be cut in Norway. Probably the sail was much like those still carried by large open boats in that country, — a single square on a mast forty feet long.[1] These masts have no standing rigging, and are taken down when not in use; and this was probably the practice of the Vikings."

In such vessels, well stocked with food and weapons, the Northmen were accustomed to spend many weeks together on the sea, now and then touching land. In such vessels they made their way to Algiers and Constantinople, to the White Sea, to Baffin's Bay. It is not, therefore, their voyage to Greenland that seems strange, but it is their success in founding a colony which could last for more than four centuries in that inhospitable climate. The question is sometimes asked whether the climate of Greenland may not have undergone some change within the last thousand years.[2] If there has been

The climate of Greenland.

[1] Perhaps it may have been a square-headed lug, like those of the Deal galley-punts; see Leslie's *Old Sea Wings, Ways, and Words, in the Days of Oak and Hemp*, London, 1890, p. 21.

[2] Some people must have queer notions about the lapse of past

any change, it must have been very slight; such as, perhaps, a small variation in the flow of ocean currents might occasion. I am inclined to believe that there may have been such a change, from the testimony of Ivar Bardsen, steward of the Gardar bishopric in the latter half of the fourteenth century, or about halfway between the time of Eric the Red and our own time. According to Bardsen there had long been a downward drifting of ice from the north and a consequent accumulation of bergs and floes upon the eastern coast of Greenland, insomuch that the customary route formerly followed by ships coming from Iceland was no longer safe, and a more southerly route had been generally adopted.[1] This slow southward extension of the polar ice-sheet upon the east of Greenland seems still to be going on at the present day.[2] It is therefore not at all improbable, but on the contrary quite probable, that a thousand years ago the mean annual temperature of the tip end of Greenland, at Cape Farewell, was a few degrees

time. I have more than once had this question put to me in such a way as to show that what the querist really had in mind was some vague impression of the time when oaks and chestnuts, vines and magnolias, grew luxuriantly over a great part of Greenland! But that was in the Miocene period, probably not less than a million years ago, and has no obvious bearing upon the deeds of Eric the Red.

[1] Bardsen, *Descriptio Grœnlandiæ*, appended to Major's *Voyages of the Venetian Brothers*, etc., pp. 40, 41; and see below, p. 242.

[2] Zahrtmann, *Journal of Royal Geographical Society*, London, 1836, vol. v. p. 102. On this general subject see J. D. Whitney, "The Climate Changes of Later Geological Times," in *Memoirs of the Museum of Comparative Zoölogy at Harvard College*, Cambridge, 1882, vol. vii. According to Professor Whitney there has also been a deterioration in the climate of Iceland.

higher than now.[1] But a slight difference of this sort might have an important bearing upon the fortunes of a colony planted there. For example, it would directly affect the extent of the hay crop. Grass grows very well now in the neighbourhood of Julianeshaab. In summer it is still a "green land," with good pasturage for cattle, but there is difficulty in getting hay enough to last through the nine months of winter. In 1855 "there were in Greenland 30 to 40 head of horned cattle, about 100 goats, and 20 sheep;" but in the ancient colony, with a population not exceeding 6,000 persons, "herds of cattle were kept which even yielded produce for exportation to Europe."[2] So strong a contrast seems to indicate a much more plentiful grass crop than to-day, although some hay might perhaps have been imported from Iceland in exchange for Greenland exports, which were chiefly whale oil, eider-down, and skins of seals, foxes, and white bears.

When once the Northmen had found their way to Cape Farewell, it would have been marvellous if such active sailors could long have avoided stumbling upon the continent of North America. Without compass or astrolabe these daring men were accustomed to traverse long stretches of open

[1] One must not too hastily infer that the mean temperature of points on the American coast south of Davis strait would be affected in the same way. The relation between the phenomena is not quite so simple. For example, a warm early spring on the coast of Greenland increases the discharge of icebergs from its fiords to wander down the Atlantic ocean; and this increase of floating ice tends to chill and dampen the summers at least as far south as Long Island, if not farther.

[2] Rink's *Danish Greenland*, pp. 27, 96, 97.

sea, trusting to the stars; and it needed only a stiff northeasterly breeze, with persistent clouds and fog, to land a westward bound "dragon" anywhere from Cape Race to Cape Cod. This is what appears to have happened to Bjarni Herjulfsson in 986, and something quite like it happened to Henry Hudson in 1609.[1] Curiosity is a motive quite sufficient to explain Leif's making the easy summer voyage to find out what sort of country Bjarni had seen. He found it thickly wooded, and as there was a dearth of good timber both in Greenland and in Iceland, it would naturally occur to Leif's friends that voyages for timber, to be used at home and also to be exported to Iceland, might turn out to be profitable.[2] As Laing says, "to go in quest of the wooded countries to the south west, from whence driftwood came to their shores, was a reasonable, intelligible motive for making a voyage in search of the lands from whence it came, and where this valuable material could be got for nothing."[3]

With the Northmen once in Greenland, the discovery of the American continent was almost inevitable.

Voyages for timber.

If now we look at the details of the story we shall find many ear-marks of truth in it. We must not look for absolute accuracy in a narrative which — as we have it — is not the work of

[1] See Read's *Historical Inquiry concerning Henry Hudson*, Albany, 1866, p. 160.

[2] "Nú tekst umrædha at nýju um Vínlandsferdh, thviat sú ferdh thikir bædhi gódh til fjár ok virdhíngar," i. e. "Now they began to talk again about a voyage to Vinland, for the voyage thither was both gainful and honourable." Rafn, p. 65.

[3] *Heimskringla*, i. 163.

Leif or Thorfinn or any of their comrades, but of compilers or copyists, honest and careful as it seems to me, but liable to misplace details and to call by wrong names things which they had never seen. Starting with these modest expectations we shall find the points of verisimilitude numerous. To begin with the least significant, somewhere on our northeastern coast the voyagers found many foxes.[1] These animals, to be sure, are found in a great many countries, but the point for us is that in a southerly and southwesterly course from Cape Farewell these sailors are said to have found them. If our narrators had been drawing upon their imaginations or dealing with semi-mythical materials, they would as likely as not have lugged into the story elephants from Africa or hippogriffs from Dreamland; mediæval writers were blissfully ignorant of all canons of probability in such matters.[2] But our narrators simply mention an animal which has for ages abounded on our northeastern coasts. One such instance is enough to suggest that they were following reports or documents which emanated ultimately from eye-witnesses and told the plain truth. A dozen such instances, if not neutralized by counter-instances, are enough to make this view extremely probable; and then one or two instances

Ear-marks of truth in the narrative.

[1] "Fjöldi var thar melrakka," i. e. "ibi vulpium magnus numerus erat," Rafn, p. 138.

[2] It is extremely difficult for an impostor to concoct a narrative without making blunders that can easily be detected by a critical scholar. For example, the Book of Mormon, in the passage cited (see above, p. 3), in supremely blissful ignorance introduces oxen, sheep, and silk-worms, as well as the knowledge of smelting iron, into pre-Columbian America.

which could not have originated in the imagination of a European writer will suffice to prove it.

Let us observe, then, that on coming to Markland they "slew a bear;"[1] the river and lake (or bay) in Vinland abounded with salmon bigger than Leif's people had ever seen;[2] on the coast they caught halibut;[3] they came to an island where there were so many eider ducks breeding that they could hardly avoid treading on their eggs;[4] and, as already observed, it was because of the abundance of wild grapes that Leif named the southernmost country he visited Vinland.

[1] "Thar í drápu their einn björn," i. e. "in qua ursum interfecerunt," id. p. 138.

[2] "Hvorki skorti thar lax í ánni nè í vatninu, ok stærra lax enn their hefdhi fyrr sèdh," i. e. "ibi neque in fluvio neque in lacu deerat salmonum copia, et quidem majoris corporis quam antea vidissent," id. p. 32.

[3] "Helgir fiskar," i. e. "sacri pisces," id. p. 148. The Danish phrase is "helleflyndre," i. e. "holy flounder." The English *halibut* is *hali* = *holy* + *but* = *flounder*. This word *but* is classed as Middle English, but may still be heard in the north of England. The fish may have been so called "from being eaten particularly on holy days" (*Century Dict.* s. v.); or possibly from a pagan superstition that water abounding in flat fishes is especially safe for mariners (Pliny, *Hist. Nat.* ix. 70); or possibly from some lost folk-tale about St. Peter (Maurer, *Isländische Volkssagen der Gegenwart*, Leipsic, 1860, p. 195).

[4] "Svâ var mörg ædhr í eynni, at varla mátti gánga fyri eggjum," i. e. "tantus in insula anatum mollissimarum numerus erat, ut præ ovis transiri fere non posset," id. p. 141. Eider ducks breed on our northeastern coasts as far south as Portland, and are sometimes in winter seen as far south as Delaware. They also abound in Greenland and Iceland, and as Wilson observes, "their nests are crowded so close together that a person can scarcely walk without treading on them. . . . The Icelanders have for ages known the value of eider down, and have done an extensive business in it." See Wilson's *American Ornithology*, vol. iii. p. 50.

From the profusion of grapes — such that the ship's stern boat is said on one occasion to have been filled with them[1] — we get a clue, though less decisive than could be wished, to the location of Vinland. The extreme northern limit of the vine in Canada is 47°, the parallel which cuts across the tops of Prince Edward and Cape Breton islands on the map.[2] Near this northern limit, however, wild grapes are by no means plenty; so that the coast upon which Leif wintered must apparently have been south of Cape Breton. Dr. Storm, who holds that Vinland was on the southern coast of Nova Scotia, has collected some interesting testimony as to the growth of wild grapes in that region, but on the whole the abundance of this fruit seems rather to point to the shores of Massachusetts Bay.[3]

Northern limit of the vine.

We may now observe that, while it is idle to attempt to determine accurately the length of the winter day, as given in our chronicles, nevertheless since that length attracted the attention of the voyagers, as something re-

Length of the winter day.

[1] "Svâ er sagt at eptirbátr theirra var fylldr af vín-berjum." / So it-is-said that afterboat their was filled of vine-berries. Rafn, p. 36.

[2] Storm, "Studies on the Vinland Voyages," *Mémoires de la société royale des antiquaires du Nord*, Copenhagen, 1888, p. 351. The limit of the vine at this latitude is some distance inland; near the shore the limit is a little farther south, and in Newfoundland it does not grow at all. Id. p. 308.

[3] The attempt of Dr. Kohl (*Maine Hist. Soc.*, New Series, vol. i.) to connect the voyage of Thorfinn with the coast of Maine seems to be successfully refuted by De Costa, *Northmen in Maine*, etc., Albany, 1870.

markable, it may fairly be supposed to indicate a latitude lower than they were accustomed to reach in their trading voyages in Europe. Such a latitude as that of Dublin, which lies opposite Labrador, would have presented no novelty to them, for voyages of Icelanders to their kinsmen in Dublin, and in Rouen as well, were common enough. Halifax lies about opposite Bordeaux, and Boston a little south of opposite Cape Finisterre, in Spain, so that either of these latitudes would satisfy the conditions of the case; either would show a longer winter day than Rouen, which was about the southern limit of ordinary trading voyages from Iceland. At all events, the length of day indicates for Vinland a latitude south of Cape Breton.

The next point to be observed is the mention of "self-sown wheat-fields."[1] This is not only an important ear-mark of truth in the narrative, but it helps us somewhat further in determining the position of Vinland. The "self-sown" cereal, which these Icelanders called "wheat," was in all probability what the English settlers six hundred years afterward called "corn," in each case applying to a new and nameless thing the most serviceable name at hand. In England "corn" means either wheat, barley, rye, and oats collectively, or more specifically wheat; in Scotland it generally means oats; in America it means maize, the "Indian corn," the cereal peculiar to the western hemisphere. The beautiful waving plant, with its exquisitely tasselled ears, which

Indian corn.

[1] { "Sjálfsána hveitiakra" / Self-sown wheat-acres } Rafn, p. 147.

was one of the first things to attract Champlain's attention, could not have escaped the notice of such keen observers as we are beginning to find Leif and Thorfinn to have been. A cereal like this, requiring so little cultivation that without much latitude of speech it might be described as growing wild, would be interesting to Europeans visiting the American coast; but it would hardly occur to European fancy to invent such a thing. The mention of it is therefore a very significant ear-mark of the truth of the narrative. As regards the position of Vinland, the presence of maize seems to indicate a somewhat lower latitude than Nova Scotia. Maize requires intensely hot summers, and even under the most careful European cultivation does not flourish north of the Alps. In the sixteenth century its northernmost limit on the American coast seems to have been at the mouth of the Kennebec (44°), though farther inland it was found by Cartier at Hochelaga, on the site of Montreal (45° 30′). A presumption is thus raised in favour of the opinion that Vinland was not farther north than Massachusetts Bay.[1]

This presumption is supported by what is said about the climate of Vinland, though it must be borne in mind that general statements about climate are apt to be very loose and misleading. We

[1] Dr. Storm makes perhaps too much of this presumption. He treats it as decisive against his own opinion that Vinland was the southern coast of Nova Scotia, and accordingly he tries to prove that the self-sown corn was not maize, but "wild rice" (*Zizania aquatica*). *Mémoires*, etc., p. 356. But his argument is weakened by excess of ingenuity.

are told that it seemed to Leif's people that cattle would be able to pass the winter out of doors there, for there was no frost and the grass was not much withered.[1] On the other hand, Thorfinn's people found the winter severe, and suffered from cold and hunger.[2] Taken in connection with each other, these two statements would apply very well to-day to our variable winters on the coast southward from Cape Ann. The winter of 1889–90 in Cambridge, for example, might very naturally have been described by visitors from higher latitudes as a winter without frost and with grass scarcely withered. Indeed, we might have described it so ourselves. On Narragansett and Buzzard's bays such soft winter weather is still more common; north of Cape Ann it is much less common. The severe winter (*magna hiems*) is of course familiar enough anywhere along the northeastern coast of America.

Winter weather in Vinland.

On the whole, we may say with some confidence that the place described by our chroniclers as Vinland was situated somewhere between Point Judith and Cape Breton; possibly we may narrow our limits and say

Probable situation of Vinland.

[1] "Thar var svâ gódhr landskostr at thví er theim sýndist, at thar mundi eingi fènadhr fódhr thurfa á vetrum; thar kvomu eingi frost á vetrum, ok lítt rènudhu thar grös," i. e. "tanta autem erat terræ bonitas, ut inde intelligere esset, pecora hieme pabulo non indigere posse, nullis incidentibus algoribus hiemalibus, et graminibus parum flaccescentibus." Rafn, p. 32.

[2] "Thar voru their um vetrinn; ok gjördhist vetr mikill, en ekki fyri unnit ok gjördhist íllt til matarins, ok tókust af veidhirnar," i. e. "hic hiemarunt; cum vero magna incideret hiems, nullumque provisum esset ali nentum, cibus cœpit deficere captu raque cessabat." Id. p. 174.

that it was somewhere between Cape Cod and Cape Ann. But the latter conclusion is much less secure than the former. In such a case as this, the more we narrow our limits the greater our liability to error.[1] While by such narrowing, moreover, the question may acquire more interest as a bone of contention among local antiquarians, its value for the general historian is not increased.

But we have not yet done with the points of verisimilitude in our story. We have now to cite two or three details that are far more striking than any as yet mentioned, — details that could never have been conjured up by the fancy of any mediæval European. We must bear in mind that "savages," whether true savages or people in the lower status of barbarism, were practically unknown to Europeans before the fifteenth century. There were no such people in Europe or in any part of Asia or Africa visited by Europeans before the great voyages of the Portuguese. Mediæval Europeans knew nothing whatever about people who would show surprise at the sight of an iron tool[2] or frantic terror at the

"Savages" unknown to mediæval Europeans.

[1] A favourite method of determining the exact spots visited by the Northmen has been to compare their statements regarding the shape and trend of the coasts, their bays, headlands, etc., with various well-known points on the New England coast. It is a tempting method, but unfortunately treacherous, because the same general description will often apply well enough to several different places. It is like summer boarders in the country struggling to tell one another where they have been to drive, — past a school-house, down a steep hill, through some woods, and by a saw-mill, etc.

[2] It is not meant that stone implements did not continue to be used in some parts of Europe far into the Middle Ages. But

voice of a bull, or who would eagerly trade off valuable property for worthless trinkets. Their imagination might be up to inventing hobgoblins and people with heads under their shoulders,[1] but it was not up to inventing such simple touches of nature as these. Bearing this in mind, let us observe that Thorfinn found the natives of Vinland eager to give valuable furs [2] in exchange for

this was not because iron was not perfectly well known, but because in many backward regions it was difficult to obtain or to work, so that stone continued in use. As my friend, Mr. T. S. Perry, reminds me, Helbig says that stone-pointed spears were used by some of the English at the battle of Hastings, and stone battle-axes by some of the Scots under William Wallace at the end of the thirteenth century. *Die Italiker in der Poebene*, Leipsic, 1879, p. 42. Helbig's statement as to Hastings is confirmed by Freeman, *Norman Conquest of England*, vol. iii. p. 473.

[1] My use of the word "inventing" is, in this connection, a slip of the pen. Of course the tales of "men whose heads do grow beneath their shoulders," the Sciopedæ, etc., as told by Sir John Mandeville, were not invented by the mediæval imagination, but copied from ancient authors. They may be found in Pliny, *Hist. Nat.*, lib. vii., and were mentioned before his time by Ktesias, as well as by Hecatæus, according to Stephanus of Byzantium. Cf. Aristophanes, *Aves*, 1553; Julius Solinus, *Polyhistor*, ed. Salmasius, cap. 240. Just as these sheets are going to press there comes to me Mr. Perry's acute and learned *History of Greek Literature*, New York, 1890, in which this subject is mentioned in connection with the mendacious and medical Ktesias: — These stories have probably acquired a literary currency "by exercise of the habit, not unknown even to students of science, of indiscriminate copying from one's predecessors, so that in reading Mandeville we have the ghosts of the lies of Ktesias, almost sanctified by the authority of Pliny, who quoted them and thereby made them a part of mediæval folk-lore — and from folk-lore, probably, they took their remote start" (p. 522).

[2] "En that var grávara ok safvali ok allskonar skinnavara" (Rafn, p. 59), — i. e. gray fur and sable and all sorts of skin-wares; in another account, "skinnavöru ok algrá skinn," which in the Danish version is "skindvarer og ægte graaskind" (id.

little strips of scarlet cloth to bind about their heads. When the Northmen found the cloth growing scarce they cut it into extremely narrow strips, but the desire of the natives was so great that they would still give a whole skin for the smallest strip. They wanted also to buy weapons, but Thorfinn forbade his men to sell them. One of the natives picked up an iron hatchet and cut wood with it; one after another tried and admired it; at length one tried it on a stone and broke its edge, and then they scornfully threw it down.[1] One day while they were trading, Thorfinn's bull ran out before them and bellowed, whereupon the whole company was instantly scattered in headlong flight. After this, when threatened with an attack by the natives, Thorfinn drew up his men for a fight and put the bull in front, very much as Pyrrhus used elephants — at first with success — to frighten the Romans and their horses.[2]

The natives of Vinland.

p. 150), — i. e. skinwares and genuine gray furs. Cartier in Canada and the Puritans in Massachusetts were not long in finding that the natives had good furs to sell.

[1] Rafn, p. 156.

[2] Much curious information respecting the use of elephants in war may be found in the learned work of the Chevalier Armandi, *Histoire militaire des éléphants*, Paris, 1843. As regards Thorfinn's bull, Mr. Laing makes the kind of blunder that our British cousins are sometimes known to make when they get the Rocky Mountains within sight of Bunker Hill monument. "A continental people in that part of America," says Mr. Laing, "could not be strangers to the much more formidable bison." *Heimskringla*, p. 169. Bisons on the Atlantic coast, Mr. Laing?! And then his comparison quite misses the point; a bison, if the natives had been familiar with him, would not have been at all formidable as compared to the bull which they had never before

These incidents are of surpassing interest, for they were attendant upon the first meeting (in all probability) that ever took place between civilized Europeans and any people below the upper status of barbarism.[1] Who were these natives encountered by Thorfinn? The Northmen called them "Skrælings," a name which one is at first sight strongly tempted to derive from the Icelandic verb *skrækja*, identical with the English *screech*. A crowd of excited Indians might most appropriately be termed Screechers.[2] This derivation, however, is not correct. The word *skræling* survives in modern Norwegian, and means a feeble or puny or *insignificant* person. Dr. Storm's suggestion is in all probability correct, that the name "Skrælings," as applied to the natives of America, had no ethnological significance, but simply meant "inferior people;" it gave concise expression to the white man's opinion that they were "a bad lot." In Icelandic literature the name is usually applied to the Eskimos, and hence it has been rashly inferred that Thorfinn found Eskimos in Vinland. Such was Rafn's opinion, and since his time the com-

Meaning of the epithet "Skrælings."

seen. A horse is much less formidable than a cougar, but Aztec warriors who did not mind a cougar were paralyzed with terror at the sight of men on horseback. It is the unknown that frightens in such cases. Thorfinn's natives were probably familiar with such large animals as moose and deer, but a deer is n't a bull.

[1] The Phœnicians, however (who in this connection may be classed with Europeans), must have met with some such people in the course of their voyages upon the coasts of Africa. I shall treat of this more fully below, p. 327.

[2] As for Indians, says Cieza de Leon, they are all noisy (alharaquientos). *Segunda Parte de la Crónica del Peru*, cap. xxiii.

mentators have gone off upon a wrong trail and much ingenuity has been wasted.[1] It would be well to remember, however, that the Europeans of the eleventh century were not ethnologists; in meeting these inferior peoples for the first time they were more likely to be impressed with the broad fact of their inferiority than to be nice in making distinctions. When we call both Australians and Fuegians "savages," we do not assert identity or relationship between them; and so when the Northmen called Eskimos and Indians by the same disparaging epithet, they doubtless simply meant to call them savages.

Our chronicle describes the Skrælings of Vinland as swarthy in hue, ferocious in aspect, with ugly hair, big eyes, and broad cheeks.[2] This will do very well for Indians, except as to the eyes. We are accustomed to think of Indian eyes as small; but in this connection it is worthy of note that a very keen

Personal appearance of the Skrælings.

[1] For example, Dr. De Costa refers to Dr. Abbott's discoveries as indicating "that the Indian was preceded by a people like the Eskimos, whose stone implements are found in the Trenton gravel." *Pre-Columbian Discovery*, p. 132. Quite so; but that was in the Glacial Period (!!), and when the edge of the ice-sheet slowly retreated northward, the Eskimo, who is emphatically an Arctic creature, doubtless retreated with it, just as he retreated from Europe. See above, p. 18. There is not the slightest reason for supposing that there were any Eskimos south of Labrador so lately as nine hundred years ago.

[2] "Their voru svartir menn ok illiligir, ok havdhu fílt hár á höfdhi. Their voru mjök eygdhir ok breidhir í kinnum," i. e. "Hi homines erant nigri, truculenti specie, fœdam in capite comam habentes, oculis magnis et genis latis." Rafn, p. 149. The Icelandic *svartr* is more precisely rendered by the identical English *swarthy* than by the Latin *niger*.

observer, Marc Lescarbot, in his minute and elaborate description of the physical appearance of the Micmacs of Acadia, speaks with some emphasis of their large eyes.[1] Dr. Storm quite reasonably suggests that the Norse expression may refer to the size not of the eye-ball, but of the eye-socket, which in the Indian face is apt to be large; and very likely this is what the Frenchman also had in mind.

These Skrælings were clad in skins, and their weapons were bows and arrows, slings, and stone hatchets. In the latter we may now, I think, be allowed to recognize the familiar tomahawk; and when we read that, in a sharp fight with the natives, Thorbrand, son of the commander Snorro, was slain, and the woman Freydis afterward found his corpse in the woods, with a flat stone sticking in the head, and his naked sword lying on the ground beside him, we seem to see how it all happened.[2] We seem to see the stealthy Indian suddenly dealing the death-blow, and then obliged for his own safety to dart away among the trees without recovering his tomahawk or seizing the sword. The Skrælings came up the river or lake in a swarm of

The Skrælings of Vinland were Indians, very likely Algonquins.

[1] "Mais quât à noz Sauvages, pour ce qui regarde les ïeux ilz ne les ont ni bleuz, ni verds, mais noirs pour la pluspart, ainsi que les cheveux; & neantmoins ne sont petits, cõme ceux des anciens Scythes, mais d'une grandeur bien agreable." Lescarbot, *Histoire de la Nouvelle France*, Paris, 1612, tom. ii. p. 714.

[2] "Hún fann fyrir sèr mann daudhan, thar var Thorbrandr Snorrason, ok stódh hellusteinn í höfdhi honum; sverdhit lá bert í hjá honum," i. e. "Illa incidit in mortuum hominem, Thorbrandum Snorrii filium, cujus capiti lapis planus impactus stetit; nudis juxta eum gladius jacuit." Rafn, p. 154.

canoes, all yelling at the top of their voices (*et illi omnes valde acutum ululabant*), and, leaping ashore, began a formidable attack with slings and arrows. The narrative calls these canoes "skin-boats" (*hudhkeipar*), whence it has been inferred that the writer had in mind the *kayaks* and *umiaks* of the Eskimos.[1] I suspect that the writer did have such boats in mind, and accordingly used a word not strictly accurate. Very likely his authorities failed to specify a distinction between bark-boats and skin-boats, and simply used the handiest word for designating canoes as contrasted with their own keeled boats.[2]

One other point which must be noticed here in connection with the Skrælings is a singular manœuvre which they are said to have practised in the course of the fight. They raised upon the end of a pole a big ball, not unlike a sheep's paunch, and of a bluish colour; this ball they swung from the pole over the heads of the white men, and it fell to the ground with a horrid noise.[3] Now,

[1] These Eskimo skin-boats are described in Rink's *Danish Greenland*, pp. 113, 179.

[2] Cf. Storm, *op. cit.* pp. 366, 367.

[3] "That sá their Karlsefni at Skrælíngar færdhu upp á stöng knött stundar mykinn thví nær til at jafna sem saudharvömb, ok helzt blán at lit, ok fleygdhu af stönginni upp á landit yfir lidh theirra Karlsefnis, ok lèt illilega vidhr, thar sem nidhr kom. Vidh thetta sló ótta myklum á Karlsefni ok allt lidh hans, svâ at thá fýsti engis annars enn flýja, ok halda undan upp medh ánni, thvíat theim thótti lidh Skrælínga drífa at sèr allum megin, ok lètta eigi, fyrr enn their koma til hamra nokkurra, ok veittu thar vidhrtöku hardha," i. e. "Viderunt Karlsefniani quod Skrælingi longurio sustulerunt globum ingentem, ventri ovillo haud absimilem, colore fere cæruleo; hunc ex longurio in terram super manum Karlsefnianorum contorserunt, qui ut decidit, dirum so-

according to Mr. Schoolcraft, this was a mode of fighting formerly common among the Algonquins, in New England and elsewhere. This big ball was what Mr. Schoolcraft calls the "balista," or what the Indians themselves call the "demon's head." It was a large round boulder, sewed up in a new skin and attached to a pole. As the skin dried it enwrapped the stone tightly; and then it was daubed with grotesque devices in various colours. "It was borne by several warriors who acted as balisteers. Plunged upon a boat or canoe, it was capable of sinking it. Brought down upon a group of men on a sudden, it produced consternation and death."[1] This is a most remarkable feature in the narrative, for it shows us the Icelandic writer (here manifestly controlled by some authoritative source of information) describing a very strange mode of fighting, which we know to have been characteristic of the Algonquins. Karlsefni's men do not seem to have relished this outlandish style of fighting; they retreated along the river bank until they came to a favourable situation among some rocks, where they made a stand and beat off their swarming assailants. The latter, as soon as they found themselves losing many warriors without gaining their point, suddenly

nuit. Hac re terrore perculsus est Karlsefnius suique omnes, ut nihil aliud cuperent quam fugere et gradum referre sursum secundum fluvium: credebant enim se ab Skrælingis undique circumveniri. Hinc non gradum stitere, priusquam ad rupes quasdam pervenissent, ubi acriter resistebant." Rafn, p. 153.

[1] Schoolcraft, *Archives of Aboriginal Knowledge*, Philadelphia, 1860, 6 vols. 4to, vol. i. p. 89; a figure of this weapon is given in the same volume, plate xv. fig. 2, from a careful description by Chingwauk, an Algonquin chief.

turned and fled to their canoes, and paddled away with astonishing celerity. Throughout the account it seems to me perfectly clear that we are dealing with Indians.

The coexistence of so many unmistakable marks of truth in our narratives may fairly be said to amount to a demonstration that they must be derived, through some eminently trustworthy channel, from the statements of intelligent eye-witnesses who took part in the events related. Here and there, no doubt, we come upon some improbable incident or a touch of superstition, such as we need not go back to the eleventh century to find very common among seamen's narratives; but the remarkable thing in the present case is that there are so few such features. One fabulous creature is mentioned. Thorfinn and his men saw from their vessel a glittering speck upon the shore at an opening in the woods. They hailed it, whereupon the creature proceeded to perform the quite human act of shooting an arrow, which killed the man at the helm. The narrator calls it a "uniped," or some sort of one-footed goblin,[1] but that is hardly reasonable, for after the shooting it went on to perform the further quite human and eminently Indian-like act of running away.[2] Evidently this discreet "uniped" was impressed with the desirableness of living to fight

The uniped.

[1] Rafn, p. 160; De Costa, p. 134; Storm, p. 330.

[2] Here the narrator seems determined to give us a genuine smack of the marvellous, for when the fleeing uniped comes to a place where his retreat seems cut off by an arm of the sea, he runs (glides, or hops?) across the water without sinking. In Vigfusson's version, however, the marvellous is eliminated, and

another day. In a narrative otherwise characterized by sobriety, such an instance of fancy, even supposing it to have come down from the original sources, counts for as much or as little as Henry Hudson's description of a mermaid.[1]

It is now time for a few words upon the character of the records upon which our story is based. And first, let us remark upon a possible source of misapprehension due to the associations with which a certain Norse word has been clothed. The old Norse narrative-writings are called "sagas," a word which we are in the habit of using in English as equivalent to legendary or semi-mythical narratives. To cite a "saga" as authority for a statement seems, therefore, to some people as inadmissible as to cite a fairy-tale; and I cannot help suspecting that to some such misleading association of ideas is due the particular form of the opinion expressed some time ago by a committee of the Massachusetts Historical Society, — "that there is the same sort of reason for believing in the existence of Leif Ericsson that there is for believing in the existence of Agamemnon. They are both traditions

Misleading associations with the word "saga."

the creature simply runs over the stubble and disappears. The incident is evidently an instance where the narrative has been "embellished" by introducing a feature from ancient classical writers. The "Monocoli," or one-legged people, are mentioned by Pliny, *Hist. Nat.*, vii. 2: "Item hominum genus qui Monocoli vocarentur, singulis cruribus, miræ permeitatis ad saltum." Cf. Aulus Gellius, *Noctes Atticæ*, viii. 4.

[1] Between Spitzbergen and Nova Zembla, June 15, 1608. For the description, with its droll details, see *Purchas his Pilgrimes*, iii. 575.

accepted by later writers, and there is no more reason for regarding as true the details related about the discoveries of the former than there is for accepting as historic truth the narrative contained in the Homeric poems." The report goes on to observe that "it is antecedently probable that the Northmen discovered America in the early part of the eleventh century; and this discovery is confirmed by the same sort of historical tradition, not strong enough to be called evidence, upon which our belief in many of the accepted facts of history rests." [1] The second of these statements is characterized by critical moderation, and expresses the inevitable and wholesome reaction against the rash enthusiasm of Professor Rafn half a century ago, and the vagaries of many an uninstructed or uncritical writer since his time. But the first statement is singularly unfortunate. It would be difficult to find a comparison more inappropriate than that between Agamemnon and Leif, between the Iliad and the Saga of Eric the Red. The story of the Trojan War and its heroes, as we have it in Homer and the Athenian dramatists, is pure folk-lore as regards form, and chiefly folk-lore as regards contents. It is in a high degree probable that this mass of folk-lore surrounds a kernel of plain fact, that in times long before the first Olympiad an actual "king of men" at Mycenæ conducted an expedition against the great city by the Simois, that the Agamemnon of the poet stands in some

Unfortunate comparison between Leif Ericsson and Agamemnon.

The story of the Trojan War, as we have it, is pure folk-lore.

[1] *Proceedings Mass. Hist. Soc.*, December, 1887.

such relation toward this chieftain as that in which the Charlemagne of mediæval romance stands toward the mighty Emperor of the West.[1] Nevertheless the story, as we have it, is simply folk-lore. If the Iliad and Odyssey contain faint reminiscences of actual events, these events are so inextricably wrapped up with mythical phraseology that by no cunning of the scholar can they be construed into history. The motives and capabilities of the actors and the conditions under which they accomplish their destinies are such as exist only in fairy-tales. Their world is as remote from that in which we live as the world of Sindbad and Camaralzaman; and this is not essentially altered by the fact that Homer introduces us to definite localities and familiar customs as often as the Irish legends of Finn M'Cumhail.[2]

The Saga of Eric the Red is not folk-lore.

It would be hard to find anything more unlike such writings than the class of Icelandic sagas to which that of Eric the Red belongs. Here we have quiet and sober narrative, not in the least like a fairy-tale, but often much like a ship's log. Whatever such narrative may be, it is not folk-lore. In act and motive, in its conditions and laws, its world is the every-day world in which we live. If now and then a "uniped" happens to stray into it, the in-

[1] I used this argument twenty years ago in qualification of the over-zealous solarizing views of Sir G. W. Cox and others. See my *Myths and Mythmakers*, pp. 191–202; and cf. Freeman on "The Mythical and Romantic Elements in Early English History," in his *Historical Essays*, i. 1–39.

[2] Curtin, *Myths and Folk-Lore of Ireland*, pp. 12, 204, 303; Kennedy, *Legendary Fictions of the Irish Celts*, pp. 203–311.

congruity is as conspicuous as in the case of Hudson's mermaid, or a ghost in a modern country inn; whereas in the Homeric fabric the supernatural is warp and woof. To assert a likeness between two kinds of literature so utterly different is to go very far astray.

As already observed, I suspect that misleading associations with the word "saga" may have exerted an unconscious influence in producing this particular kind of blunder, — for it is nothing less than a blunder. Resemblance is tacitly assumed between the Iliad and an Icelandic saga. Well, between the Iliad and *some* Icelandic sagas there is a real and strong resemblance. In truth these sagas are divisible into two well marked and sharply contrasted classes. In the one class belong the Eddic Lays, and the *mythical sagas*, such as the Volsunga, the stories of Ragnar, Frithiof, and others; and along with these, though totally different in source, we may for our present purpose group the *romantic sagas*, such as Parceval, Remund, Karlamagnus, and others brought from southern Europe. These are alike in being composed of legendary and mythical materials; they belong essentially to the literature of folk-lore. In the other class come the *historical sagas*, such as those of Njal and Egil, the Sturlunga, and many others, with the numerous biographies and annals.[1] These

Mythical and historical sagas.

[1] Nowhere can you find a more masterly critical account of Icelandic literature than in Vigfusson's "Prolegomena" to his edition of *Sturlunga Saga*, Oxford, 1878, vol. i. pp. ix.–ccxiv. There is a good but very brief account in Horn's *History of the*

writings give us history, and often very good history indeed. "Saga" meant simply any kind of literature in narrative form; the good people of Iceland did not happen to have such a handy word as "history," which they could keep entire when they meant it in sober earnest and chop down into "story" when they meant it otherwise. It is very much as if we were to apply the same word to the Arthur legends and to William of Malmesbury's judicious and accurate chronicles, and call them alike "stories."

The narrative upon which our account of the Vinland voyages is chiefly based belongs to the class of historical sagas. It is the Saga of Eric the Red, and it exists in two different versions, of which one seems to have been made in the north, the other in the west, of Iceland. The western version is the earlier and in some respects the better. It is found in two vellums, that of the great collection known as *Hauksbók* (AM. 544), and that which is simply known as AM. 557 from its catalogue number in Arni Magnusson's collection. Of these the former, which is the best preserved, was written in a beautiful hand by Hauk Erlendsson, between 1305 and 1334, the year of his death. This western version is the one which has generally been printed under the title, "Saga of Thorfinn Karlsefni." It is the one to which I have most frequently referred in the present chapter.[1]

The western or Hauks-bók version of Eric the Red's Saga.

Literature of the Scandinavian North, transl. by R. B. Anderson, Chicago, 1884, pp. 50–70.

[1] It is printed in Rafn, pp. 84–187, and in *Grönlands historiske*

The northern version is that which was made about the year 1387 by the priest Jón Thórdharson, and contained in the famous compilation known as the *Flateyar-bók*, or "Flat Island Book."[1] This priest was editing the saga of King Olaf Tryggvesson, which is contained in that compilation, and inasmuch as Leif Ericsson's presence at King Olaf's court was connected both with the introduction of Christianity into Greenland and with the discovery of Vinland, Jón paused, after the manner of mediæval chroniclers, and inserted then and there what he knew about Eric and Leif and Thorfinn. In doing this, he used parts of the original saga of Eric the Red (as we find it reproduced in the western version), and added thereunto a considerable amount of material concerning the Vinland voyages derived from other sources. Jón's version thus made has generally been printed under the title, "Saga of Eric the Red."[2]

The northern or Flateyarbók version.

Now the older version, written at the beginning of the fourteenth century, gives an account of things which happened three centuries before it was written. A cautious scholar will, as a rule, be slow to consider any historical narrative as quite

Mindesmærker, i. 352–443. The most essential part of it may now be found, under its own name, in Vigfusson's *Icelandic Prose Reader*, pp. 123–140.

[1] It belonged to a man who lived on Flat Island, in one of the Iceland fiords.

[2] It is printed in Rafn, pp. 1–76, under the title "Thættir af Eireki Rauda ok Grænlendíngum." For a critical account of these versions, see Storm, *op. cit.* pp. 319–325; I do not, in all respects, follow him in his depreciation of the Flateyar-bók version.

satisfactory authority, even when it contains no improbable statements, unless it is nearly contemporary with the events which it records. Such was the rule laid down by the late Sir George Cornewall Lewis, and it is a very good rule; the proper application of it has disencumbered history of much rubbish. At the same time, like all rules, it should be used with judicious caution and not allowed to run away with us. As applied by Lewis to Roman history it would have swept away in one great cataclysm not only kings and decemvirs, but Brennus and his Gauls to boot, and left us with nothing to swear by until the invasion of Pyrrhus.[1] Subsequent research has shown that this was going altogether too far. The mere fact of distance in time between a document and the events which it records is only negative testimony against its value, for it may be a faithful transcript of some earlier document or documents since lost. It is so difficult to prove a negative that the mere lapse of time simply raises a presumption the weight of which should be estimated by a careful survey of all the probabilities in the case. Among the many Icelandic vellums that are known to have perished[2] there

Presumption against sources not contemporary.

[1] Lewis's *Inquiry into the Credibility of the Early Roman History*, 2 vols., London, 1855.

[2] And notably in that terrible fire of October, 1728, which consumed the University Library at Copenhagen, and broke the heart of the noble collector of manuscripts, Arni Magnusson. The great eruption of Hecla in 1390 overwhelmed two famous homesteads in the immediate neighbourhood. From the local history of these homesteads and their inmates, Vigfusson thinks it not unlikely that some records may still be there "awaiting the spade and pickaxe of a new Schliemann." *Sturlunga Saga*, p. cliv.

may well have been earlier copies of Eric the Red's Saga.

Hauk Erlendsson reckoned himself a direct descendant, in the eighth generation, from Snorro, son of Thorfinn and Gudrid, born in Vinland. He was an important personage in Iceland, a man of erudition, author of a brief book of contemporary annals and a treatise on arithmetic in which he introduced the Arabic numerals into Iceland. In those days the lover of books, if he would add them to his library, might now and then obtain an original manuscript, but usually he had to copy them or have them copied by hand. The Hauks-bók, with its 200 skins, one of the most extensive Icelandic vellums now in existence, is really Hauk's private library, or what there is left of it, and it shows that he was a man who knew how to make a good choice of books. He did a good deal of his copying himself, and also employed two clerks in the same kind of work.[1]

Hauk Erlendsson and his manuscripts.

Now I do not suppose it will occur to any rational being to suggest that Hauk may have written down his version of Eric the Red's Saga from an oral tradition nearly three centuries old. The narrative could not have been so long preserved in its integrity, with so little extravagance of statement and so many marks of truthfulness in details foreign to ordinary Icelandic experience, if

[1] An excellent facsimile of Hauk's handwriting is given in Rafn, tab. iii., lower part; tab. iv. and the upper part of tab. iii. are in the hands of his two amanuenses. See Vigfusson, *op. cit.* p. clxi.

it had been entrusted to oral tradition alone. One might as well try to imagine Drake's "World Encompassed" handed down by oral tradition from the days of Queen Elizabeth to the days of Queen Victoria. Such transmission is possible enough with heroic poems and folk-tales, which deal with a few dramatic situations and a stock of mythical conceptions familiar at every fireside; but in a simple matter-of-fact record of sailors' observations and experiences on a strange coast, oral tradition would not be long in distorting and jumbling the details into a result quite undecipherable. The story of the Zeno brothers, presently to be cited, shows what strange perversions occur, even in written tradition, when the copyist, instead of faithfully copying records of unfamiliar events, tries to edit and amend them. One cannot reasonably doubt that Hauk's vellum of Eric the Red's Saga, with its many ear-marks of truth above mentioned, was copied by him — and quite carefully and faithfully withal — from some older vellum not now forthcoming.

The story is not likely to have been preserved to Hauk's time by oral tradition only.

As we have no clue, however, beyond the internal evidence, to the age or character of the sources from which Hauk copied, there is nothing left for us to do but to look into other Icelandic documents, to see if anywhere they betray a knowledge of Vinland and the voyages thither. Incidental references to Vinland, in narratives concerned with other matters, are of great significance in this connection; for they imply on the part of the narrator a presumption that

Allusions to Vinland in other documents.

his readers understand such references, and that it is not necessary to interrupt his story in order to explain them. Such incidental references imply the existence, during the interval between the Vinland voyages and Hauk's manuscript, of many intermediate links of sound testimony that have since dropped out of sight; and therefore they go far toward removing whatever presumption may be alleged against Hauk's manuscript because of its distance from the events.

Now the Eyrbyggja Saga, written between 1230 and 1260, is largely devoted to the settlement of Iceland, and is full of valuable notices of the heathen institutions and customs of the tenth century. The Eyrbyggja, having occasion to speak of Thorbrand Snorrason, observes incidentally that he went from Greenland to Vinland with Karlsefni and was killed in a battle with the Skrælings.[1] We have already mentioned the death of this Thorbrand, and how Freydis found his body in the woods. Eyrbyggja Saga.

Three Icelandic tracts on geography, between the twelfth and fourteenth centuries, mention Helluland and Vinland, and in two of these accounts Markland is interposed between Helluland and Vinland.[2] One of these tracts mentions the voyages of Leif and Thorfinn. It forms part of an essay called "Guide to the Holy Land," by Nik-

[1] Vigfusson, *Eyrbyggja Saga*, pp. 91, 92. Another of Karlsefni's comrades, Thorhall Gamlason, is mentioned in *Grettis Saga*, Copenhagen, 1859, pp. 22, 70; he went back to Iceland, settled on a farm there, and was known for the rest of his life as "the Vinlander." See above, pp. 165, 168.

[2] Werlauf, *Symbolæ ad Geogr. Medii Ævi*, Copenhagen, 1820.

ulas Sæmundsson, abbot of Thvera, in the north of Iceland, who died 1159. This Nikulas was curious in matters of geography, and had travelled extensively.

The abbot Nikulas, etc.

With the celebrated Ari Thorgilsson, usually known as Fródhi, "the learned," we come to testimony nearly contemporaneous in time and extremely valuable in character. This erudite priest, born in 1067, was the founder of historical writing in Iceland. He was the principal author of the "Landnáma-bók," already mentioned as a work of thorough and painstaking research unequalled in mediæval literature. His other principal works were the "Konunga-bók," or chronicle of the kings of Norway, and the "Islendinga-bók," or description of Iceland.[1] Ari's books, written not in monkish Latin, but in a good vigorous vernacular, were a mine of information from which all subsequent Icelandic historians were accustomed to draw such treasures as they needed. To his diligence and acumen they were all, from Snorro Sturlason down, very much indebted. He may be said to have given the tone to history-writing in Iceland, and it was a high tone.

Ari Fródhi.

Unfortunately Ari's Islendinga-bók has perished. One cannot help suspecting that it may have contained the contemporary materials from which Eric the Red's Saga in the Hauks-bók was

[1] For a critical estimate of Ari's literary activity and the extent of his work, the reader is referred to Möbius, *Are's Isländerbuch*, Leipsic, 1869; Maurer, "Über Ari Thorgilsson und sein Isländerbuch," in *Germania*, xv.; Olsen, *Ari Thorgilsson hinn Fródhi*, Reykjavik, 1889, pp. 214–240.

ultimately drawn. For Ari made an abridgment or epitome of his great book, and this epitome, commonly known as "Libellus Islandorum," still survives. In it Ari makes brief mention of Greenland, and refers to his paternal uncle, Thorkell Gellison, as authority for his statements. This Thorkell Gellison, of Helgafell, a man of high consideration who flourished about the middle of the eleventh century, had visited Greenland and talked with one of the men who accompanied Eric when he went to settle in Brattahlid in 986. From this source Ari gives us the interesting information that Eric's party found in Greenland "traces of human habitations, fragments of boats, and stone implements; so from this one might conclude that people of the kind who inhabited Vinland and were known by the (Norse) Greenlanders as Skrælings must have roamed about there." [1] Observe the force of this allusion. The settlers in Greenland did not at first (nor for a long time) meet with barbarous or savage natives there, but only with the vestiges of their former presence. But when Ari wrote the above passage, the memory of Vinland and its fierce Skrælings was still fresh, and Ari very properly inferred from the archæological remains in

Ari's significant allusion to Vinland.

[1] Their "fundo thar manna vister bæthi austr ok vestr á landi ok kæiplabrot ok steinsmíthi, that es af thví má scilja, at thar hafdhi thessconar thjóth farith es Vínland hefer bygt, ok Grænlendínger calla Skrelínga," i. e. "invenerunt ibi, tam in orientali quam occidentali terræ parte, humanæ habitationis vestigia, navicularum fragmenta et opera fabrilia ex lapide, ex quo intelligi potest, ibi versatum esse nationem quæ Vinlandiam incoluit quamque Grænlandi Skrælingos appellant." Rafn, p. 207.

Greenland that a people similar (in point of barbarism) to the Skrælings must have been there. Unless Ari and his readers had a distinct recollection of the accounts of Vinland, such a reference would have been only an attempt to explain the less obscure by the more obscure. It is to be regretted that we have in this book no more allusions to Vinland; but if Ari could only leave us one such allusion, he surely could not have made that one more pointed.

But this is not quite the only reference that Ari makes to Vinland. There are three others that must in all probability be assigned to him. Two occur in the Landnáma-bók, the first in a passage where mention is made of Ari Marsson's voyage to a place in the western ocean near Vinland;[1] the only point in this allusion which need here concern us is that Vinland is tacitly assumed to be a known geographical situation to which others may be referred. The second reference occurs in one of those elaborate and minutely specific genealogies in the Landnáma-bók: "Their son was Thordhr Hest-höfdhi, father of Karlsefni, who found Vinland the Good, Snorri's father," etc.[2] The third reference occurs in the Kristni Saga, a kind of supplement to the Landnáma-bók, giving an account of the introduction of Christianity into Iceland; here it is related how Leif Ericsson came to be called "Leif the Lucky," 1. from having rescued a shipwrecked crew off the coast of Greenland, 2. from having

Other references.

[1] *Landnáma-bók*, part ii. chap. xxii.
[2] Id. part iii. chap. x.

discovered "Vinland the Good."[1] From these brief allusions, and from the general relation in which Ari Fródhi stood to later writers, I suspect that if the greater Islendinga-bók had survived to our time we should have found in it more about Vinland and its discoverers. At any rate, as to the existence or a definite and continuous tradition all the way from Ari down to Hauk Erlendsson, there can be no question whatever.[2]

[1] *Kristni Saga*, apud *Biskupa Sögur*, Copenhagen, 1858, vol. i. p. 20.

[2] Indeed, the parallel existence of the Flateyar-bók version of Eric the Red's Saga, alongside of the Hauks-bók version, is pretty good proof of the existence of a written account older than Hauk's time. The discrepancies between the two versions are such as to show that Jón Thordharson did not copy from Hauk, but followed some other version not now forthcoming. Jón mentions six voyages in connection with Vinland: 1. Bjarni Herjulfsson; 2. Leif; 3. Thorvald; 4. Thorstein and Gudrid; 5. Thorfinn Karlsefni; 6. Freydis. Hauk, on the other hand, mentions only the two principal voyages, those of Leif and Thorfinn; ignoring Bjarni, he accredits his adventures to Leif on his return voyage from Norway in 999, and he makes Thorvald a comrade of Thorfinn, and mixes his adventures with the events of Thorfinn's voyage. Dr. Storm considers Hauk's account intrinsically the more probable, and thinks that in the Flateyar-bók we have a later amplification of the tradition. But while I agree with Dr. Storm as to the general superiority of the Hauk version, I am not convinced by his arguments on this point. It seems to me likely that the Flateyar-bók here preserves more faithfully the details of an older tradition too summarily epitomized in the Hauks-bók. As the point in no way affects the general conclusions of the present chapter, it is hardly worth arguing here. The main thing for us is that the divergencies between the two versions, when coupled with their agreement in the most important features, indicate that both writers were working upon the basis of an antecedent written tradition, like the authors of the first and third synoptic gospels. Only here, of course, there are in the divergencies no symptoms of what the Tübingen school would call "*tendenz*," impairing and obscuring to an indeterminate extent the general

Adam of Bremen.

The testimony of Adam of Bremen brings us yet one generation nearer to the Vinland voyages, and is very significant. Adam was much interested in the missionary work in the north of Europe, and in 1073, the same year that Hildebrand was elected to the papacy, he published his famous "Historia Ecclesiastica," in which he gave an account of the conversion of the northern nations from the time of Leo III. to that of Hildebrand's predecessor. In prosecuting his studies, Adam made a visit to the court of Swend Estridhsen, king of Denmark, nephew of Cnut the Great, king of Denmark and England. Swend's reign began in 1047, so that Adam's visit must have occurred between that date and 1073. The voyage of Leif and Thorfinn would at that time have been within the memory of living men, and would be likely to be known in Denmark, because the intercourse between the several parts of the Scandinavian world was incessant; there was continual coming and going. Adam learned what he could of Scandinavian geography, and when he published his history, he did just what a modern writer would do under similar circumstances; he appended to his book some notes on the geography of those remote countries, then so little known to his readers in central and southern Europe. After giving some account of Denmark, Sweden, and Norway, he describes the colony in Iceland, and

trustworthiness of the narratives. On the whole, it is pretty clear that Hauks-bók and Flateyar-bók were independent of each other, and collated, each in its own way, earlier documents that have probably since perished.

then the further colony in Greenland, and concludes by saying that out in that ocean there is another country, or island, which has been visited by many persons, and is called Vinland because of wild grapes that grow there, out of which a very good wine can be made. Either rumour had exaggerated the virtues of fox-grape juice, or the Northmen were not such good judges of wine as of ale. Adam goes on to say that corn, likewise, grows in Vinland without cultivation; and as such a statement to European readers must needs have a smack of falsehood, he adds that it is based not upon fable and guess-work, but upon "trustworthy reports (*certa relatione*) of the Danes."

Scanty as it is, this single item of strictly contemporary testimony is very important, because quite incidentally it gives to the later accounts such confirmation as to show that they rest upon a solid basis of continuous tradition and not upon mere unintelligent hearsay.[1] The unvarying character of the tradition, in its essential details, indicates that it must have been committed to writing at a very early period, probably not later than the time of Ari's uncle Thorkell, who was contemporary with Adam of Bremen. If, however, we read the

[1] It is further interesting as the only undoubted reference to Vinland in a mediæval book written beyond the limits of the Scandinavian world. There is also, however, a passage in Ordericus Vitalis (*Historia Ecclesiastica*, iv. 29), in which *Finland* and the Orkneys, along with Greenland and Iceland, are loosely described as forming part of the dominions of the kings of Norway. This Finland does not appear to refer to the country of the Finns, east of the Baltic, and it has been supposed that it may have been meant for Vinland. The book of Ordericus was written about 1140.

whole passage in which Adam's mention of Vinland occurs, it is clear from the context that his own information was not derived from an inspection of Icelandic documents. He got it, as he tells us, by talking with King Swend; and all that he got, or all that he thought worth telling, was this curious fact about vines and self-sown corn growing so near to Greenland; for Adam quite misconceived the situation of Vinland, and imagined it far up in the frozen North. After his mention of Vinland, the continental character of which he evidently did not suspect, he goes on immediately to say, "After this island nothing inhabitable is to be found in that ocean, all being covered with unendurable ice and boundless darkness." That most accomplished king, Harold Hardrada, says Adam, tried not long since to ascertain how far the northern ocean extended, and plunged along through this darkness until he actually reached the end of the world, and came near tumbling off![1] Thus the worthy Adam,

Adam's misconception of the situation.

[1] The passage from Adam of Bremen deserves to be quoted in full: "Præterea unam adhuc insulam [regionam] recitavit [i. e. Svendus rex] a multis in eo repertam oceano, quæ dicitur Vinland, eo quod ibi vites sponte nascantur, vinum bonum gerentes [ferentes]; nam et fruges ibi non seminatas abundare, non fabulosa opinione, sed certa comperimus relatione Danorum. Post quam insulam terra nulla invenitur habitabilis in illo oceano, sed omnia quæ ultra sunt glacie intolerabili ac caligine immensa plena sunt; cujus rei Marcianus ita meminit: ultra Thyle, inquiens, navigare unius diei mare concretum est. Tentavit hoc nuper experientissimus Nordmannorum princeps Haroldus, qui latitudinem septentrionalis oceani perscrutatus navibus, tandem caligantibus ante ora deficientis mundi finibus, immane abyssi baratrum, retroactis vestigiis, vix salvus evasit." *Descriptio insularum aquilonis*, cap. 38, apud *Hist. Ecclesiastica*, iv. ed. Lin-

while telling the truth about fox-grapes and maize as well as he knew how, spoiled the effect of his story by putting Vinland in the Arctic regions. The juxtaposition of icebergs and vines was a little too close even for the mediæval mind so hospitable to strange yarns. Adam's readers generally disbelieved the "trustworthy reports of the Danes," and when they thought of Vinland at all, doubtless thought of it as somewhere near the North Pole.[1] We shall do well to bear this in mind when we come to consider the possibility of Columbus having obtained from Adam of Bremen any hint in the least likely to be of use in his own enterprise.[2]

Summary of the argument.

To sum up the argument: — we have in Eric the Red's Saga, as copied by Hauk Erlendsson, a document for the existence of which we are required to account. That document

denbrog, Leyden, 1595. No such voyage is known to have been undertaken by Harold of Norway, nor is it likely. Adam was probably thinking of an Arctic voyage undertaken by one Thorir under the auspices of King Harold; one of the company brought back a polar bear and gave it to King Swend, who was much pleased with it. See Rafn, 339. "Regionam" and "ferentes" in the above extract are variant readings found in some editions.

[1] "Det har imidlertid ikke forhindret de senere forfattere, der benyttede Adam, fra at blive mistænksomme, og saalænge Adams beretning stod alene, har man i regelen vægret sig for at tro den. Endog den norske forfatter, der skrev 'Historia Norvegiæ' og som foruden Adam vel ogsaa har kjendt de hjemlige sagn om Vinland, maa have anseet beretningen for fabelagtig og derfor forbigaaet den; han kjendte altfor godt Grønland som et nordligt isfyldt Polarland til at ville tro paa, at i nærheden fandtes et Vinland." Storm, in *Aarbøger for Nordisk Oldkyndighed*, etc., Copenhagen, 1887, p. 300.

[2] See below, p. 386.

contains unmistakable knowledge of some things which mediæval Europeans could by no human possibility have learned, except through a visit to some part of the coast of North America further south than Labrador or Newfoundland. It tells an eminently probable story in a simple, straightforward way, agreeing in its details with what we know of the North American coast between Point Judith and Cape Breton. Its general accuracy in the statement and grouping of so many remote details is proof that its statements were controlled by an exceedingly strong and steady tradition, — altogether too strong and steady, in my opinion, to have been maintained simply by word of mouth. These Icelanders were people so much given to writing that their historic records during the Middle Ages were, as the late Sir Richard Burton truly observed, more complete than those of any other country in Europe.[1] It is probable that the facts mentioned in Hauk's document rested upon some kind of a written basis as early as the eleventh century; and it seems quite clear that the constant tradition, by which all the allusions to Vinland and the Skrælings are controlled, had become established by that time. The data are more scanty than we could wish, but they all point in the same direction as surely as straws blown by a steady wind, and their cumulative force is so great as to fall but little short of demonstration. For these reasons it seems to me that the Saga of Eric the Red should be accepted as history; and there is another reason which might not have counted

[1] Burton, *Ultima Thule*, London, 1875, i. 237.

for much at the beginning of this discussion, but at the end seems quite solid and worthy of respect. The narrative begins with the colonization of Greenland and goes on with the visits to Vinland. It is unquestionably sound history for the first part; why should it be anything else for the second part? What shall be said of a style of criticism which, in dealing with one and the same document, arbitrarily cuts it in two in the middle and calls the first half history and the last half legend? which accepts its statements as serious so long as they keep to the north of the sixtieth parallel, and dismisses them as idle as soon as they pass to the south of it? Quite contrary to common sense, I should say.

The only discredit which has been thrown upon the story of the Vinland voyages, in the eyes either of scholars or of the general public, has arisen from the eager credulity with which ingenious antiquarians have now and then tried to prove more than facts will warrant. It is peculiarly a case in which the judicious historian has had frequent occasion to exclaim, Save me from my friends! The only fit criticism upon the wonderful argument from the Dighton inscription is a reference to the equally wonderful discovery made by Mr. Pickwick at Cobham;[1] and when it was attempted,

Absurd speculations of zealous antiquarians.

[1] See *Pickwick Papers*, chap. xi. I am indebted to Mr. Tillinghast, of Harvard University Library, for calling my attention to a letter from Rev. John Lathrop, of Boston, to Hon. John Davis, August 10, 1809, containing George Washington's opinion of the Dighton inscription. When President Washington visited

some sixty years ago, to prove that Governor

Cambridge in the fall of 1789, he was shown about the college buildings by the president and fellows of the university. While in the museum he was observed to "fix his eye" upon a full-size copy of the Dighton inscription made by the librarian, James Winthrop. Dr. Lathrop, who happened to be standing near Washington, "ventured to give the opinion which several learned men had entertained with respect to the origin of the inscription." Inasmuch as some of the characters were thought to resemble "oriental" characters, and inasmuch as the ancient Phœnicians had sailed outside of the Pillars of Hercules, it was "conjectured" that some Phœnician vessels had sailed into Narragansett bay and up the Taunton river. "While detained by winds, or other causes now unknown, the people, it has been conjectured, made the inscription, now to be seen on the face of the rock, and which we may suppose to be a record of their fortunes or of their fate."

"After I had given the above account, the President smiled and said he believed the learned gentlemen whom I had mentioned were mistaken; and added that in the younger part of his life his business called him to be very much in the wilderness of Virginia, which gave him an opportunity to become acquainted with many of the customs and practices of the Indians. The Indians, he said, had a way of writing and recording their transactions, either in war or hunting. When they wished to make any such record, or leave an account of their exploits to any who might come after them, they scraped off the outer bark of a tree, and with a vegetable ink, or a little paint which they carried with them, on the smooth surface they wrote in a way that was generally understood by the people of their respective tribes. As he had so often examined the rude way of writing practised by the Indians of Virginia, and observed many of the characters on the inscription then before him so nearly resembled the characters used by the Indians, he had no doubt the inscription was made long ago by some natives of America." *Proceedings of Massachusetts Historical Society*, vol. x. p. 115. This pleasant anecdote shows in a new light Washington's accuracy of observation and unfailing common-sense. Such inscriptions have been found by the thousand, scattered over all parts of the United States; for a learned study of them see Garrick Mallery, "Pictographs of the North American Indians," *Reports of Bureau of Ethnology*, iv. 13–256. "The voluminous discussion upon the

Arnold's old stone windmill at Newport[1] was a tower built by the Northmen, no wonder if the exposure of this rather laughable notion should have led many people to suppose that the story of Leif and Thorfinn had thereby been deprived of some part of its support. But the story never rested upon any such evidence, and does not call for evidence of such sort. There is nothing in the story to indicate that the Northmen ever founded

Dighton rock inscription," says Colonel Mallery, "renders it impossible wholly to neglect it. . . . It is merely a type of Algonquin rock-carving, not so interesting as many others. . . . It is of purely Indian origin, and is executed in the peculiar symbolic character of the Kekeewin," p. 20. The characters observed by Washington in the Virginia forests would very probably have been of the same type. Judge Davis, to whom Dr. Lathrop's letter was addressed, published in 1809 a paper maintaining the Indian origin of the Dighton inscription.

A popular error, once started on its career, is as hard to kill as a cat. Otherwise it would be surprising to find, in so meritorious a book as Oscar Peschel's *Geschichte des Zeitalters der Entdeckungen*, Stuttgart, 1877, p. 82, an unsuspecting reliance upon Rafn's ridiculous interpretation of this Algonquin pictograph. In an American writer as well equipped as Peschel, this particular kind of blunder would of course be impossible; and one is reminded of Humboldt's remark, "Il est des recherches qui ne peuvent s'exécuter que près des sources mêmes." *Examen critique*, etc., tom. ii. p. 102.

In old times, I may add, such vagaries were usually saddled upon the Phœnicians, until since Rafn's time the Northmen have taken their place as the pack-horses for all sorts of antiquarian "conjecture."

[1] See Palfrey's *History of New England*, vol. i. pp. 57–59; Mason's *Reminiscences of Newport*, pp. 392–407. Laing (*Heimskringla*, pp. 182–185) thinks the Yankees must have intended to fool Professor Rafn and the Royal Society of Antiquaries at Copenhagen; "Those sly rogues of Americans," says he, "dearly love a quiet hoax;" and he can almost hear them chuckling over their joke in their club-room at Newport. I am afraid these Yankees were less rogues and more fools than Mr. Laing makes out.

a colony in Vinland, or built durable buildings there. The distinction implicitly drawn by Adam of Bremen, who narrates the colonization of Iceland and Greenland, and then goes on to speak of Vinland, not as colonized, but simply as discovered, is a distinction amply borne out by our chronicles. Nowhere is there the slightest hint of a colony or settlement established in Vinland. On the contrary, our plain, business-like narrative tells us that Thorfinn Karlsefni tried to found a colony and failed; and it tells us why he failed. The Indians were too many for him. The Northmen of the eleventh century, without firearms, were in much less favourable condition for withstanding the Indians than the Englishmen of the seventeenth; and at the former period there existed no cause for emigration from Norway and Iceland at all comparable to the economic, political, and religious circumstances which, in a later age, sent thousands of Englishmen to Virginia and New England. The founding of colonies in America in the sixteenth and seventeenth centuries was no pastime; it was a tale of drudgery, starvation, and bloodshed, that curdles one's blood to read; more attempts failed than succeeded. Assuredly Thorfinn gave proof of the good sense ascribed to him when he turned his back upon Vinland. But if he or any other Northman had ever succeeded in establishing a colony there, can anybody explain why it should not have stamped the fact of its existence either upon the soil, or upon history, or both, as unmistakably as the colony of Green-

There is no reason for supposing that the Northmen founded a colony in Vinland

land? Archæological remains of the Northmen abound in Greenland, all the way from Immartinek to near Cape Farewell; the existence of one such relic on the North American continent has never yet been proved. Not a single vestige of the Northmen's presence here, at all worthy of credence, has ever been found. The writers who have, from time to time, mistaken other things for such vestiges, have been led astray because they have failed to distinguish between the different conditions of proof in Greenland and in Vinland. As Mr. Laing forcibly put the case, nearly half a century ago, "Greenland was a colony with communications, trade, civil and ecclesiastical establishments, and a considerable population," for more than four centuries. "Vinland was only visited by flying parties of woodcutters, remaining at the utmost two or three winters, but never settling there permanently. . . . To expect here, as in Greenland, material proofs to corroborate the documentary proofs, is weakening the latter by linking them to a sort of evidence which, from the very nature of the case, — the temporary visits of a ship's crew, — cannot exist in Vinland, and, as in the case of Greenland, come in to support them."[1]

No archæological remains of the Northmen have been found south of Davis strait.

The most convincing proof that the Northmen never founded a colony in America, south of Davis strait, is furnished by the total absence of horses, cattle, and other domestic animals from the soil of North America until they were brought hither by the Spanish, French, and English set-

[1] Laing, *Heimskringla*, vol. i. p. 181.

tlers in the sixteenth and seventeenth centuries.

If the Northmen had founded a successful colony, they would have introduced domestic cattle into the North American fauna;

If the Northmen had ever settled in Vinland, they would have brought cattle with them, and if their colony had been successful, it would have introduced such cattle permanently into the fauna of the country. Indeed, our narrative tells us that Karlsefni's people "had with them all kinds of cattle, having the intention to settle in the land if they could."[1] Naturally the two things are coupled in the narrator's mind. So the Portuguese carried livestock in their earliest expeditions to the Atlantic islands;[2] Columbus brought horses and cows, with vines and all kinds of grain, on his second voyage to the West Indies;[3] when the French, under Baron Léry, made a disastrous attempt to found a colony on or about Cape Breton in 1518, they left behind them, upon Sable island, a goodly stock of cows and pigs, which throve and multiplied long after their owners had gone;[4] the Pilgrims at Plymouth had cattle, goats, and swine as early as 1623.[5] In fact, it would be difficult to imagine a

[1] "Their höfdhu medh sèr allskonar fènadh, thvíat their ætlödhu at byggja landit, ef their mætti that," i. e., "illi omne pecudum genus secum habuerunt, nam terram, si liceret, coloniis frequentare cogitarunt." Rafn, p. 57.

[2] Major, *Prince Henry the Navigator*, p. 241.

[3] Irving's *Life of Columbus*, New York, 1828, vol. i. p. 293.

[4] *Histoire chronologique de la Nouvelle France*, pp. 40, 58; this work, written in 1689 by the Recollet friar Sixte le Tac, has at length been published (Paris, 1888) with notes and other original documents by Eugène Réveillaud. See, also, Læt, *Novus Orbis*, 39.

[5] John Smith, *Generall Historie*, 247.

community of Europeans subsisting anywhere for any length of time without domestic animals. We have seen that the Northmen took pains to raise cattle in Greenland, and were quick to comment upon the climate of Vinland as favourable for pasturage. To suppose that these men ever founded a colony in North America, but did not bring domestic animals thither, would be absurd. But it would be scarcely less absurd to suppose that such animals, having been once fairly introduced into the fauna of North America, would afterward have vanished without leaving a vestige of their presence. As for the few cattle for which Thorfinn could find room in his three or four dragon-ships, we may easily believe that his people ate them up before leaving the country, especially since we are told they were threatened with famine. But that domestic cattle, after being supported on American soil during the length of time involved in the establishment of a successful colony (say, for fifty or a hundred years), should have disappeared without leaving abundant traces of themselves, is simply incredible. Horses and kine are not dependent upon man for their existence; when left to themselves, in almost any part of the world, they run wild and flourish in what naturalists call a "feral" state. Thus we find feral horned cattle in the Falkland and in the Ladrone islands, as well as in the ancient Chillingham Park, in Northumberland; we find feral pigs in Jamaica; feral European dogs in La Plata; feral horses in Turkestan, and also in Mexico, descended from Spanish

and such animals could not have vanished and left no trace of their existence.

horses.[1] If the Northmen had ever founded a colony in Vinland, how did it happen that the English and French in the seventeenth century, and from that day to this, have never set eyes upon a wild horse, or wild cattle, pigs, or hounds, or any such indication whatever of the former presence of civilized Europeans? I do not recollect ever seeing this argument used before, but it seems to me conclusive. It raises against the hypothesis of a Norse colonization in Vinland a presumption extremely difficult if not impossible to overcome.[2]

[1] Darwin, *Animals and Plants under Domestication*, London, 1868, vol. i. pp. 27, 77, 84.

[2] The views of Professor Horsford as to the geographical situation of Vinland and its supposed colonization by Northmen are set forth in his four monographs, *Discovery of America by Northmen — address at the unveiling of the statue of Leif Eriksen*, etc., Boston, 1888; *The Problem of the Northmen*, Cambridge, 1889; *The Discovery of the Ancient City of Norumbega*, Boston, 1890; *The Defences of Norumbega*, Boston, 1891. Among Professor Horsford's conclusions the two principal are: 1. that the "river flowing through a lake into the sea" (Rafn, p. 147) is Charles river, and that Leif's booths were erected near the site of the present Cambridge hospital; 2. that "Norumbega" — a word loosely applied by some early explorers to some region or regions somewhere between the New Jersey coast and the Bay of Fundy — was the Indian utterance of "Norbega" or "Norway;" and that certain stone walls and dams at and near Watertown are vestiges of an ancient "city of Norumbega," which was founded and peopled by Northmen and carried on a more or less extensive trade with Europe for more than three centuries.

With regard to the first of these conclusions, it is perhaps as likely that Leif's booths were within the present limits of Cambridge as in any of the numerous places which different writers have confidently assigned for them, all the way from Point Judith to Cape Breton. A judicious scholar will object not so much to the conclusion as to the character of the arguments by which it is reached. Too much weight is attached to hypothetical etymologies.

As for the colony in Greenland, while its population seems never to have exceeded 5,000 or 6,000 souls, it maintained its existence and its intercourse with Europe uninterruptedly from its settlement in 986, by Eric the Red, for more than four hundred years. Early in the fourteenth century the West Bygd, or western settlement, near Godthaab, seems to have contained ninety farmsteads and four churches; while the East Bygd, or eastern settlement, near Julianeshaab, contained one hundred and ninety farmsteads, with one cathedral and eleven smaller churches, two villages, and three or four monasteries.[1] Between Tunnudliorbik and Igaliko fiords, and about thirty miles from the ruined stone houses of Brattahlid, there now stands, imposing in its decay, the simple but massive structure of Kakortok church, once the "cathedral" church of the Gardar bishopric, where the Credo was intoned and censers swung, while not less than ten generations lived and died. About the beginning of the twelfth century there was a movement at Rome for establishing new dioceses in "the islands of the ocean;" in 1106 a

Further fortunes of the Greenland colony.

With regard to the Norse colony alleged to have flourished for three centuries, it is pertinent to ask, what became of its cattle and horses? Why do we find no vestiges of the burial-places of these Europeans? or of iron tools and weapons of mediæval workmanship? Why is there no documentary mention, in Scandinavia or elsewhere in Europe, of this transatlantic trade? etc., etc. Until such points as these are disposed of, any further consideration of the hypothesis may properly be postponed.

[1] Laing, *Heimskringla*, i. 141. A description of the ruins may be found in two papers in *Meddelelser om Gronland*, Copenhagen, 1883 and 1889.

bishop's see was erected in the north of Iceland, and one at about the same time in the Færoes. In 1112, Eric Gnupsson,[1] having been appointed by Pope Paschal II. "bishop of Greenland and

Ruins of the church at Kakortok.

Vinland *in partibus infidelium*," went from Iceland to organize his new diocese in Greenland. It is mentioned in at least six different vellums that in 1121 Bishop Eric "went in search of Vinland."[2] It is nowhere mentioned that he found it, and Dr. Storm thinks it probable that he perished in the enterprise, for, within the next year or next but one, the Greenlanders asked for a new bishop,

Bishop Eric's voyage in search of Vinland, 1121.

[1] Sometimes called Eric Uppsi; he is mentioned in the Landnáma-bók as a native of Iceland.

[2] Storm, *Islandske Annaler*, Christiania, 1888; Reeves, *The Finding of Wineland the Good*, London, 1890, pp. 79–81.

and Eric's successor, Bishop Arnold, was consecrated in 1124.[1] After Eric there was a regular succession of bishops appointed by the papal court, down at least to 1409, and seventeen of these bishops are mentioned by name. We do not learn that any of them ever repeated Eric's experiment of searching for Vinland. So far as existing Icelandic vellums know, there was no voyage to Vinland after 1121. Very likely, however, there may have been occasional voyages for timber from Greenland to the coast of the American continent, which did not attract attention or call for comment in Iceland. This is rendered somewhat probable from an entry in the "Elder Skálholt Annals," a vellum written about 1362. This informs us that in 1347 "there came a ship from Greenland, less in size than small Icelandic trading-vessels. It was without an anchor. There were seventeen men on board, and they had sailed to Markland, but had afterwards been driven hither by storms at sea."[2]

The ship from Markland, 1347.

[1] Storm, in *Aarbøger for Nordisk Oldkyndighed*, 1887, p. 319.

[2] Reeves, *op. cit.* p. 83. In another vellum it is mentioned that in 1347 "a ship came from Greenland, which had sailed to Markland, and there were eighteen men on board." As Mr. Reeves well observes: "The nature of the information indicates that the knowledge of the discovery had not altogether faded from the memories of the Icelanders settled in Greenland. It seems further to lend a measure of plausibility to a theory that people from the Greenland colony may from time to time have visited the coast to the southwest of their home for supplies of wood, or for some kindred purpose. The visitors in this case had evidently intended to return directly from Markland to Greenland, and had they not been driven out of their course to Iceland, the probability is that this voyage would never have found mention in Icelandic chronicles, and all knowledge of it must have vanished

This is the latest mention of any voyage to or from the countries beyond Greenland.

If the reader is inclined to wonder why a colony could be maintained in southern Greenland more easily than on the coasts of Nova Scotia or Massachusetts, or even why the Northmen did not at once abandon their fiords at Brattahlid and come in a flock to these pleasanter places, he must call to mind two important circumstances. First, the settlers in southern Greenland did not meet with barbarous natives, but only with vestiges of their former presence. It was not until the twelfth century that, in roaming the icy deserts of the far north in quest of seals and bearskins, the Norse hunters encountered tribes of Eskimo using stone knives and whalebone arrow-heads;[1] and it was not until the fourteenth century that we hear of their getting into a war with these people. In 1349 the West Bygd was attacked and destroyed by Eskimos; in 1379 they invaded the East Bygd and wrought sad havoc; and it is generally believed that some time after 1409 they completed the destruction of the colony.

The Greenland colony attacked by Eskimos.

Secondly, the relative proximity of Greenland to the mother country, Iceland, made it much easier to sustain a colony there than in the more distant Vinland. In colonizing, as in campaigning, distance from one's base is sometimes the supreme circumstance. This is illustrated by the fact that

as completely as did the colony to which the Markland visitors belonged."

[1] Storm, *Monumenta historica Norvegiæ*, p. 77.

the very existence of the Greenland colony itself depended upon perpetual and untrammelled exchange of commodities with Iceland; and when once the source of supply was cut off, the colony soon languished. In 1380 and 1387 the crowns of Norway and Denmark descended upon Queen Margaret, and soon she made her precious contribution to the innumerable swarm of instances that show with how little wisdom the world is ruled. She made the trade to Greenland, Iceland, and the Færoe isles "a royal monopoly which could only be carried on in ships belonging to, or licensed by, the sovereign. . . . Under the monopoly of trade the Icelanders could have no vessels, and no object for sailing to Greenland; and the vessels fitted out by government, or its lessees, would only be ready to leave Denmark or Bergen for Iceland at the season they ought to have been ready to leave Iceland to go to Greenland. The colony gradually fell into oblivion."[1] When this prohibitory management was abandoned after 1534 by Christian III., it was altogether too late. Starved by the miserable policy of governmental interference with freedom of trade, the little Greenland colony soon became too weak to sustain itself against the natives whose hostility had, for half a century, been growing more and more dangerous. Precisely when or how

Queen Margaret's monopoly, and its baneful effects.

[1] Laing, *Heimskringla*, i. 147. It has been supposed that the Black Death, by which all Europe was ravaged in the middle part of the fourteenth century, may have crossed to Greenland, and fatally weakened the colony there; but Vigfusson says that the Black Death never touched Iceland (*Sturlunga Saga*, vol. i. p. cxxix.), so that it is not so likely to have reached Greenland.

it perished we do not know. The latest notice we have of the colony is of a marriage ceremony performed (probably in the Kakortok church), in 1409, by Endrede Andreasson, the last bishop.[1] When, after three centuries, the great missionary, Hans Egede, visited Greenland, in 1721, he found the ruins of farmsteads and villages, the population of which had vanished.

The story of the Venetian brothers.

Our account of pre-Columbian voyages to America would be very incomplete without some mention of the latest voyage said to have been made by European vessels to the ancient settlement of the East Bygd. I refer to the famous narrative of the Zeno brothers, which has furnished so many subjects of contention for geographers that a hundred years ago John Pinkerton called it "one of the most puzzling in the whole circle of literature."[2] Nevertheless a great deal has been done, chiefly through the acute researches of Mr. Richard Henry Major and Baron Nordenskjöld, toward clearing up this mystery, so that certain points in the Zeno narrative may now be regarded as established;[3] and from these essential points we may

[1] Laing, *op. cit.* i. 142.

[2] Yet this learned historian was quite correct in his own interpretation of Zeno's story, for in the same place he says, "If real, his Frisland is the Ferro islands, and his Zichmni is Sinclair." Pinkerton's *History of Scotland*, London, 1797, vol. i. p. 261.

[3] Major, *The Voyages of the Venetian Brothers, Nicolò and Antonio Zeno, to the Northern Seas in the XIVth Century*, London, 1873 (Hakluyt Society); cf. Nordenskjöld, *Om bröderna Zenos resor och de äldsta kartor öfver Norden*, Stockholm, 1883.

form an opinion as to the character of sundry questionable details.

The Zeno family was one of the oldest and most distinguished in Venice. Among its members in the thirteenth and fourteenth centuries we find a doge, several senators and members of the Council of Ten, and military commanders of high repute. Of these, Pietro Dracone Zeno, about 1350, was captain-general of the Christian league for withstanding the Turks; and his son Carlo achieved such success in the war against Genoa that he was called the Lion of St. Mark, and his services to Venice were compared with those of Camillus to Rome. Now this Carlo had two brothers, — Nicolò, known as "the Chevalier," and Antonio. After the close of the Genoese war the Chevalier Nicolò was seized with a desire to see the world,[1] and more particularly England and Flanders. So about 1390 he fitted up a ship at his own expense, and, passing out from the strait of Gibraltar, sailed northward upon the Atlantic. After some days of fair weather, he was caught in a storm and blown along for many days more, until at length the ship was cast ashore on one of the Færoe islands and wrecked, though most of the crew and goods were rescued.

The Zeno family.

Nicolò Zeno wrecked upon one of the Færoe islands, 1390.

[1] "Or M. Nicolò il Caualiere . . . entrò in grandissimo desiderio di ueder il mondo, e peregrinare, e farsi capace di varij costumi e di lingue de gli huomini, acciò che con le occasioni poi potesse meglio far seruigio alla sua patria ed à se acquistar fama e onore." The narrative gives 1380 as the date of the voyage, but Mr. Major has shown that it must have been a mistake for 1390 (*op. cit.* xlii.–xlviii.).

According to the barbarous custom of the Middle Ages, some of the natives of the island (Scandinavians) came swarming about the unfortunate strangers to kill and rob them, but a great chieftain, with a force of knights and men-at-arms, arrived upon the spot in time to prevent such an outrage. This chief was Henry Sinclair of Roslyn, who in 1379 had been invested by King Hacon VI., of Norway, with the earldom of the Orkneys and Caithness. On learning Zeno's rank and importance, Sinclair treated him with much courtesy, and presently a friendship sprang up between the two. Sinclair was then engaged with a fleet of thirteen vessels in conquering and annexing to his earldom the Færoe islands, and on several occasions profited by the military and nautical skill of the Venetian captain. Nicolò seems to have enjoyed this stirring life, for he presently sent to his brother Antonio in Venice an account of it, which induced the latter to come and join him in the Færoe islands. Antonio arrived in the course of 1391, and remained in the service of Sinclair fourteen years, returning to Venice in time to die there in 1406. After Antonio's arrival, his brother Nicolò was appointed to the chief command of Sinclair's little fleet, and assisted him in taking possession of the Shetland islands, which were properly comprised within his earldom. In the course of these adventures, Nicolò seems to have had his interest aroused in reports about Greenland. It was not more than four or five years since Queen Margaret had undertaken to make a royal monopoly of the Greenland trade in furs and whale oil, and this would

be a natural topic of conversation in the Færoes. In July, 1393, or 1394, Nicolò Zeno sailed to Greenland with three ships, and visited the East Bygd. After spending some time there, not being accustomed to such a climate, he caught cold, and died soon after his return to the Færoes, probably in 1395. His brother Antonio succeeded to his office and such emoluments as pertained to it; and after a while, at Earl Sinclair's instigation, he undertook a voyage of discovery in the Atlantic ocean, in order to verify some fishermen's reports of the existence of land a thousand miles or more to the west. One of these fishermen was to serve as guide to the expedition, but unfortunately he died three days before the ships were ready to sail. Nevertheless, the expedition started, with Sinclair himself on board, and encountered vicissitudes of weather and fortune. In fog and storm they lost all reckoning of position, and found themselves at length on the western coast of a country which, in the Italian narrative, is called "Icaria," but which has been supposed, with some probability, to have been Kerry, in Ireland. Here, as they went ashore for fresh water, they were attacked by the natives and several of their number were slain. From this point they sailed out into the broad Atlantic again, and reached a place supposed to be Greenland, but which is so vaguely described that the identification is very difficult.[1] Our narrative here ends

Nicolò's voyage to Greenland, cir. 1394.

Voyage of Earl Sinclair and Antonio Zeno.

[1] It appears on the Zeno map as "Trin pmontor," about the site of Cape Farewell; but how could six days' sail W. from

somewhat confusedly. We are told that Sinclair remained in this place, "and explored the whole of the country with great diligence, as well as the coasts on both sides of Greenland." Antonio Zeno, on the other hand, returned with part of the fleet to the Færoe islands, where he arrived after sailing eastward for about a month, during five and twenty days of which he saw no land. After relating these things and paying a word of affectionate tribute to the virtues of Earl Sinclair, "a prince as worthy of immortal memory as any that ever lived for his great bravery and remarkable goodness," Antonio closes his letter abruptly: "But of this I will say no more in this letter, and hope to be with you very shortly, and to satisfy your curiosity on other subjects by word of mouth."[1]

The person thus addressed by Antonio was his brother, the illustrious Carlo Zeno. Soon after reaching home, after this long and eventful absence, Antonio died. Besides his letters he had written a more detailed account of the affairs in the northern seas. These papers remained for more than a century in the palace of the family at Venice, until one of the children, in his mischievous play, got hold of them and tore them up.

Kerry, followed by four days' sail N. E., reach any such point? and how does this short outward sail consist with the return voyage, twenty days E. and eight days S. E., to the Færoes? The place is also said to have had "a fertile soil" and "good rivers," a description in nowise answering to Greenland.

[1] "Però non ui dirò altro in questa lettera, sperando tosto di essere con uoi, e di sodisfarui di molte altre cose con la uiua uoce." Major, p. 34.

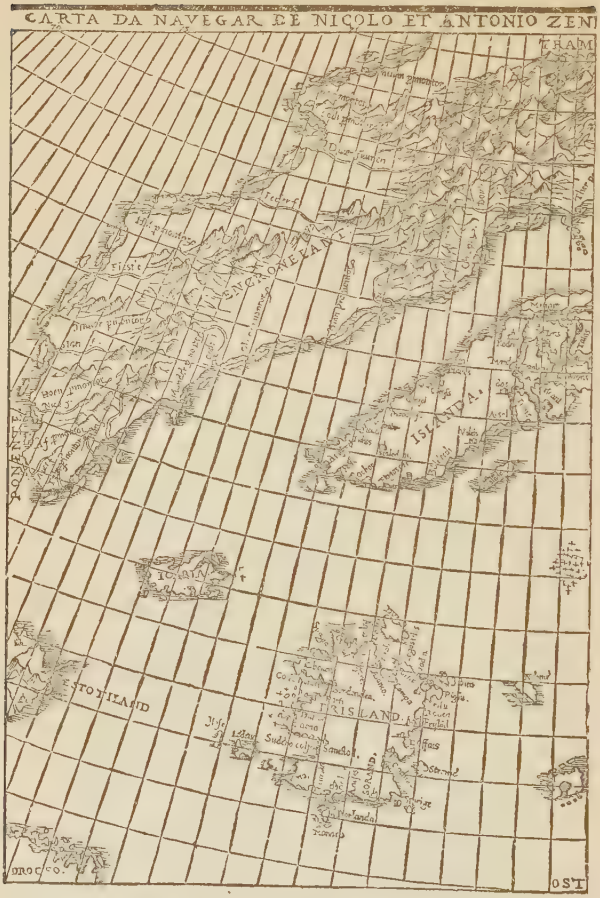
This child was Antonio's great-great-great-grandson, Nicolò, born in 1515. When this young Nicolò had come to middle age, and was a member of the Council of Ten, he happened to come across some remnants of these documents, and then all at once he remembered with grief how he had, in his boyhood, pulled them to pieces.[1] In the light of the rapid progress in geographical discovery since 1492, this story of distant voyages had now for Nicolò an interest such as it could not have had for his immediate ancestors. Searching the palace he found a few grimy old letters and a map or sailing chart, rotten with age, which had been made or at any rate brought home by his ancestor Antonio. Nicolò drew a fresh copy of this map, and pieced together the letters as best he could, with more or less explanatory text of his own, and the result was the little book which he published in 1558.[2]

Publication of the remains of the documents by the younger Nicolò Zeno.

Unfortunately young Nicolò, with the laudable purpose of making it all as clear as he could,

[1] "All these letters were written by Messire Antonio to Messire Carlo, his brother; and I am grieved that the book and many other writings on these subjects have, I don't know how, come sadly to ruin; for, being but a child when they fell into my hands, I, not knowing what they were, tore them in pieces, as children will do, and sent them all to ruin: a circumstance which I cannot now recall without the greatest sorrow. Nevertheless, in order that such an important memorial should not be lost, I have put the whole in order, as well as I could, in the above narrative." Major, p. 35.

[2] Nicolò Zeno. *Dello scoprimento dell' isole Frislanda, Eslanda, Engronelanda, Estotilanda, & Icaria, fatto per due fratelli Zeni, M. Nicolò il Caualiere, & M. Antonio. Libro Vno, col disegno di dette Isole.* Venice, 1558. Mr. Major's book contains the entire text, with an English translation.



Zeno Map, cir. 1400 — western half.

Zeno Map, cir. 1400 — eastern half.

thought it necessary not simply to reproduce the old weather-beaten map, but to amend it by putting on here and there such places and names as his diligent perusal of the manuscript led him to deem wanting to its completeness.[1] Under the most favourable circumstances that is a very difficult sort of thing to do, but in this case the circumstances were far from favourable. Of course Nicolò got these names and places into absurd

[1] The map is taken from Winsor's *Narr. and Crit. Hist.*, i. 127, where it is reduced from Nordenskjöld's *Studien ok Forskningar*. A better because larger copy may be found in Major's *Voyages of the Venetian Brothers*. The original map measures 12 × 15½ inches. In the legend at the top the date is given as M CCC LXXX. but evidently one X has been omitted, for it should be 1390, and is correctly so given by Marco Barbaro, in his *Genealogie dei nobili Veneti*; of Antonio Zeno he says, "Scrisse con il fratello Nicolò Kav. li viaggi dell' Isole sotto il polo artico, e di quei scoprimente del 1390, e che per ordine di Zicno, re di Frislanda, si portò nel continente d' Estotilanda nell' America settentrionale e che si fermò 14 anni in Frislanda, cioè 4 con suo fratello Nicolò e 10 solo." (This valuable work has never been published. The original MS., in Barbaro's own handwriting, is preserved in the Biblioteca di San Marco at Venice. There is a seventeenth century copy of it among the Egerton MSS. in the British Museum.) — Nicolò did not leave Italy until after December 14, 1388 (Muratori, *Rerum Italicarum Scriptores*, tom. xxii. p. 772). The map can hardly have been made before Antonio's voyage, about 1400. The places on the map are wildly out of position, as was common enough in old maps. Greenland is attached to Norway according to the general belief in the Middle Ages. In his confusion between the names "Estland" and "Islanda," young Nicolò has tried to reproduce the Shetland group, or something like it, and attach it to Iceland. "Icaria," probably Kerry, in Ireland, has been made into an island and carried far out into the Atlantic. The queerest of young Nicolò's mistakes was in placing the monastery of St. Olaus ("St. Thomas"). He should have placed it on the southwest coast of Greenland, near his "Af p̄montor;" but he has got it on the extreme northeast, just about where Greenland is joined to Europe.

positions, thus perplexing the map and damaging its reputation. With regard to names, there was obscurity enough, to begin with. In the first place, they were Icelandic names falling upon the Italian ears of old Nicolò and Antonio, and spelled by them according to their own notions; in the second place, these outlandish names, blurred and defaced withal in the weather-stained manuscript, were a puzzle to the eye of young Nicolò, who could but decipher them according to *his* notions. The havoc that can be wrought upon winged words, subjected to such processes, is sometimes marvellous.[1] Perhaps the slightest sufferer, in this case, was the name of the group of islands upon one of which the shipwrecked Nicolò was rescued by Sinclair. The

Queer transformations of names.

[1] "Combien de coquilles typographiques ou de lectures défectueuses ont créé de noms boiteux, qu'il est ensuite bien difficile, quelquefois impossible de redresser! l'histoire et la géographie en sont pleines." Avezac, *Martin Waltzemüller*, p. 9.

It is interesting to see how thoroughly words can be disguised by an unfamiliar phonetic spelling. I have seen people hopelessly puzzled by the following bill, supposed to have been made out by an illiterate stable-keeper somewhere in England: —

Osafada	7s 6d
Takinonimome	4d
	7s 10d

Some years ago Professor Huxley told me of a letter from France which came to the London post-office thus addressed: —

Sromfrédévi,
Piqué du lait,
Londres,
Angleterre.

This letter, after exciting at first helpless bewilderment and then busy speculation, was at length delivered to the right person, *Sir Humphry Davy*, in his rooms at the Royal Institution on Albemarle street, just off from *Piccadilly!*

name *Færoislander* sounded to Italian ears as *Frislanda*, and was uniformly so written.[1] Then the pronunciation of *Shetland* was helped by prefixing a vowel sound, as is common in Italian, and so it came to be *Estland* and *Esland*. This led young Nicolò's eye in two or three places to confound it with *Islanda*, or *Iceland*, and probably in one place with *Irlanda*, or *Ireland*. Where old Nicolò meant to say that the island upon which he was living with Earl Sinclair was somewhat larger than Shetland, young Nicolò understood him as saying that it was somewhat larger than Ireland; and so upon the amended map "Frislanda" appears as one great island surrounded by tiny islands.[2] After the publication of this map, in 1558, sundry details were copied from it by the new maps of that day, so that even far down into the seventeenth century it was common to depict a big "Frislanda" somewhere in mid-ocean. When at length it was proved that no such island exists, the reputation of the Zeno narrative was seriously damaged. The nadir of reaction against it was reached when it was declared to be a tissue of lies invented by the younger Nicolò,[3] apparently for the purpose of setting up a Venetian claim to the discovery of America.

"Frislanda."

[1] Columbus, on his journey to Iceland in 1477, also heard the name *Færoislander* as *Frislanda*, and so wrote it in the letter preserved for us in his biography by his son Ferdinand, hereafter to be especially noticed. See Major's remarks on this, *op. cit.* p. xix.

[2] Perhaps in the old worn-out map the archipelago may have been blurred so as to be mistaken for one island. This would aid in misleading young Nicolò.

[3] See the elaborate paper by Admiral Zahrtmann, in *Nordisk*

The narrative, however, not only sets up no such claim, but nowhere betrays a consciousness that its incidents entitle it to make such a claim. It had evidently not occurred to young Nicolò to institute any comparison between his ancestors' voyages to Greenland and the voyages of Columbus to the western hemisphere, of which *we now know* Greenland to be a part. The knowledge of the North American coast, and of the bearing of one fact upon another fact in relation to it, was still, in 1558, in an extremely vague and rudimentary condition. In the mind of the Zeno brothers, as the map shows, Greenland was a European peninsula; such was the idea common among mediæval Northmen, as is nowhere better illustrated than in this map. Neither in his references to Greenland, nor to Estotiland and Drogio, presently to be considered, does young Nicolò appear in the light of a man urging or suggesting a "claim." He appears simply as a modest and conscientious editor, interested in the deeds of his ancestors and impressed with the fact that he has got hold of important documents, but intent only upon giving his material as correctly as possible, and refraining from all sort of comment except such as now

The narrative nowhere makes a claim to the "discovery of America."

Tidsskrift for Oldkyndighed, Copenhagen, 1834, vol. i., and the English translation of it in *Journal of Royal Geographical Society*, London, 1836, vol. v. All that human ingenuity is ever likely to devise against the honesty of Zeno's narrative is presented in this erudite essay, which has been so completely demolished under Mr. Major's heavy strokes that there is not enough of it left to pick up. As to this part of the question, we may now safely cry, "finis, laus Deo!"

and then seems needful to explain the text as he himself understands it.

The identification of "Frislanda" with the Færoe islands was put beyond doubt by the discovery that the "Zichmni" of the narrative means Henry Sinclair; and, in order to make this discovery, it was only necessary to know something about the history of the Orkneys; hence old Pinkerton, as above remarked, got it right. The name "Zichmni" is, no doubt, a fearful and wonderful bejugglement; but Henry Sinclair is a personage well known to history in that corner of the world, and the deeds of "Zichmni," as recounted in the narrative, are neither more nor less than the deeds of Sinclair. Doubtless Antonio spelled the name in some queer way of his own, and then young Nicolò, unable to read his ancestor's pot-hooks where — as in the case of proper names — there was no clue to guide him, contrived to make it still queerer. Here we have strong proof of the genuineness of the narrative. If Nicolò had been concocting a story in which Earl Sinclair was made to figure, he would have obtained his knowledge from literary sources, and thus would have got his names right; the earl might have appeared as Enrico de Santo Claro, but not as "Zichmni." It is not at all likely, however, that any literary knowledge of Sinclair and his doings was obtainable in Italy in the sixteenth century. The Zeno narrative, moreover, in its references to Greenland in connection with the Chevalier Nicolò's visit to the East Bygd, shows a topographical knowledge that was other-

Earl Sinclair.

wise quite inaccessible to the younger Nicolò. Late in the fourteenth century Ivar Bardsen, steward to the Gardar bishopric, wrote a description of Greenland, with sailing directions for reaching it, which modern research has proved to have been accurate in every particular. Bardsen's details and those of the Zeno narrative mutually corroborate each other. But Bardsen's book did not make its way down into Europe until the very end of the sixteenth century,[1] and then amid the dense ignorance prevalent concerning Greenland its details were not understood until actual exploration within the last seventy years has at length revealed their meaning. The genuineness of the Zeno narrative is thus conclusively proved by its knowledge of Arctic geography, such as could have been obtained only by a visit to the far North at a time before the Greenland colony had finally lost touch with its mother country.

Bardsen's "Description of Greenland."

The visit of the Chevalier Nicolò, therefore, about 1394, has a peculiar interest as the last distinct glimpse afforded us of the colony founded by Eric the Red before its melancholy disappearance from history. Already the West Bygd had ceased to exist. Five and forty years before that time it

[1] It was translated into Dutch by the famous Arctic explorer, William Barentz, whose voyages are so graphically described in Motley's *United Netherlands*, vol. iii. pp. 552–576. An English translation was made for Henry Hudson. A very old Danish version may be found in Rafn's *Antiquitates Americanæ*, pp. 300–318; Danish, Latin, and English versions in Major's *Voyages of the Venetian Brothers*, etc., pp. 39–54; and an English version in De Costa's *Sailing Directions of Henry Hudson*, Albany, 1869, pp. 61–96.

had been laid waste and its people massacred by Eskimos, and trusty Ivar Bardsen, tardily sent with a small force to the rescue, found nothing left alive but a few cattle and sheep running wild.[1] Nicolò Zeno, arriving in the East Bygd, found there a monastery dedicated to St. Olaus, a name which in the narrative has become St. Thomas. To this monastery came friars from Norway and other countries, but for the most part from Iceland.[2] It stood "hard by a hill which vomited fire like Vesuvius and Etna." There was also in the neighbourhood a spring of hot water which the ingenious friars conducted in pipes into their monastery and church, thereby keeping themselves comfortable in the coldest weather. This water, as it came into the kitchen, was hot enough to boil meats and vegetables. The monks even made use of it in warming covered gardens or hot-beds in which they raised sundry fruits and herbs that in milder climates grow out of doors.[3] "Hither in summer-

The monastery of St. Olaus and its hot spring.

[1] So he tells us himself: "Quo cum venissent, nullum hominem, neque christianum neque paganum, invenerunt, tantummodo fera pecora et oves deprehenderunt, ex quibus quantum naves ferre poterant in has deportato domum redierunt." *Descriptio Grœnlandiæ*, apud Major, p. 53. The glacial men had done their work of slaughter and vanished.

[2] "Ma la maggior parte sono delle Islande." Mr. Major is clearly wrong in translating it "from the Shetland Isles." The younger Nicolò was puzzled by the similarity of the names Islanda and Eslanda, and sometimes confounded Iceland with the Shetland group. But in this place Iceland is evidently meant.

[3] This application of the hot water to purposes of gardening reminds us of the similar covered gardens or hot-beds constructed by Albertus Magnus in the Dominican monastery at Cologne in the thirteenth century. See Humboldt's *Kosmos*, ii. 130.

time come many vessels from . . . the Cape above Norway, and from Trondheim, and bring the friars all sorts of comforts, taking in exchange fish . . . and skins of different kinds of animals. . . . There are continually in the harbour a number of vessels detained by the sea being frozen, and waiting for the next season to melt the ice."[1]

This mention of the volcano and the hot spring is very interesting. In the Miocene period the Atlantic ridge was one of the principal seats of volcanic activity upon the globe; the line of volcanoes extended all the way from Greenland down into central France. But for several hundred thousand years this activity has been diminishing. In France, in the western parts of Great Britain and the Hebrides, the craters have long since become extinct. In the far North, however, volcanic action has been slower in dying out. Iceland, with no less than twenty active volcanoes, is still the most considerable centre of such operations in Europe. The huge volcano on Jan Mayen island, between Greenland and Spitzbergen, is still in action. Among the submerged peaks in the northern seas explosions still now and then occur, as in 1783, when a small island was thrown up near Cape Reykianes, on the southern coast of Iceland, and sank again after a year.[2] Midway between Iceland and Greenland there appears to have stood,

Volcanoes of the north Atlantic ridge.

[1] Major, *op. cit.* p. 16. The narrative goes on to give a description of the skin-boats of the Eskimo fishermen.

[2] Daubeny, *Description of Active and Extinct Volcanoes*, London, 1848, pp. 307; cf. Judd, *Volcanoes*, London, 1881, p. 234.

in the Middle Ages, a small volcanic island discovered by that Gunnbjörn who first went to Greenland. It was known as Gunnbjörn's Skerries, and was described by Ivar Bardsen.[1] This island is no longer above the surface, and its fate is recorded upon Ruysch's map of the world in the 1508 edition of Ptolemy: "Insula hæc anno Domini 1456 fuit totaliter combusta," — this island was entirely burnt (i. e. blown up in an eruption) in 1456; and in later maps Mr. Major has found the corrupted name "Gombar Scheer" applied to the dangerous reefs and shoals left behind by this explosion.[2] Where volcanic action is declining geysers and boiling springs are apt to abound, as in Iceland; where it has become extinct at a period geologically recent, as in Auvergne and the Rhine country, its latest vestiges are left in the hundreds of thermal and mineral springs whither fashionable invalids congregate to drink or to bathe.[3] Now in Greenland, at the present day, hot springs are found, of which the most noted are those on the island of Ounartok, at the entrance to the fiord of that name.

Fate of Gunnbjörn's Skerries, 1456.

Volcanic phenomena in Greenland.

[1] "Ab Snefelsneso Islandiæ, quâ brevissimus in Gronlandiam trajectus est, duorum dierum et duarum noctium spatio navigandum est recto cursu versus occidentem; ibique Gunnbjœrnis scopulos invenies, inter Gronlandiam et Islandiam medio situ interjacentes. Hic cursus antiquitûs frequentabatur, nunc vero glacies ex recessu oceani euroaquilonari delata scopulos ante memeratos tam prope attigit, ut nemo sine vitæ discrimine antiquum cursum tenere possit, quemadmodum infra dicetur." *Descriptio Grœnlandiæ*, apud Major, *op. cit.* p. 40.

[2] *Op. cit.* p. lxxvi. See below, vol. ii. p. 115, note B.

[3] Judd, *op. cit.* pp. 217–220.

These springs seem to be the same that were described five hundred years ago by Ivar Bardsen. As to volcanoes, it has been generally assumed that those of Greenland are all extinct; but in a country as yet so imperfectly studied this only means that eruptions have not been recorded.[1] On the whole, it seems to me that the mention, in our Venetian narrative, of a boiling spring and an active volcano in Greenland is an instance of the peculiar sort — too strange to have been invented, but altogether probable in itself — that adds to the credit of the narrative.

Thus far, in dealing with the places actually visited by Nicolò or Antonio, or by both brothers, we have found the story consistent and intelligible. But in what relates to countries beyond Greenland, countries which were not visited by either of the brothers, but about which Antonio heard reports, it is quite a different thing. We are introduced to a jumble very unlike the clear, business-like account of Vinland voyages in the Hauks-bók. Yet in this medley there are some statements curiously suggestive of things in North America. It will be remembered that Antonio's voyage with Sinclair (somewhere about 1400) was undertaken

[1] My friend, Professor Shaler, tells me that "a volcano during eruption might shed its ice mantle and afterward don it again in such a manner as to hide its true character even on a near view;" and, on the other hand, "a voyager not familiar with volcanoes might easily mistake the cloud-bonnet of a peak for the smoke of a volcano." This, however, will not account for Zeno's "hill that vomited fire," for he goes on to describe the use which the monks made of the pumice and calcareous tufa for building purposes.

in order to verify certain reports of the existence of land more than a thousand miles west of the Færoe islands.

About six and twenty years ago, said Antonio in a letter to Carlo, four small fishing craft, venturing very far out upon the Atlantic, had been blown upon a strange coast, where their crews were well received by the people. The land proved to be an island rather smaller than Iceland (or Shetland?), with a high mountain whence flowed four rivers. The inhabitants were intelligent people, possessed of all the arts, but did not understand the language of these Norse fishermen.[1] There happened, however, to be one European among them, who had himself been cast ashore in that country and had learned its language; he could speak Latin, and found some one among the shipwrecked men who could understand him. There was a populous city with walls, and the king had Latin books in his library which nobody could read.[2] All kinds of metals abounded, and especially gold.[3] The woods were of immense extent. The people traded with Greenland, importing thence pitch (?), brimstone, and furs. They sowed grain and made "beer." They made small boats, but were ignorant of the loadstone and the compass. For this reason, they

Estotiland

[1] They were, therefore, not Northmen.

[2] Pruning this sentence of its magniloquence, might it perhaps mean that there was a large palisaded village, and that the chief had some books in Roman characters, a relic of some castaway, which he kept as a fetish?

[3] With all possible latitude of interpretation, this could not be made to apply to any part of America north of Mexico.

held the newcomers in high estimation.[1] The name of the country was Estotiland.

There is nothing so far in this vague description to show that Estotiland was an American country, except its western direction and perhaps its trading with Greenland. The points of unlikeness are at least as numerous as the points of likeness. But in what follows there is a much stronger suggestion of North America.

For some reason not specified an expedition was undertaken by people from Estotiland to a country to the southward named Drogio, and these Norse mariners, or some of them, because they understood the compass, were put in charge of it.[2] But the people of Drogio were cannibals, and the people from Estotiland on their arrival were taken prisoners and devoured, — all save the few Northmen, who were saved because of their marvellous skill in catching fish with nets. The barbarians seemed to have set much store by these white men, and perhaps to have regarded them as objects of "medicine." One of the fishermen in particular became so famous that a neighbouring tribe made war upon the tribe which kept him, and winning the victory took him over into its own custody. This sort of thing happened several times. Various tribes fought to secure the person and services of this Fisherman,

Drogio.

[1] The magnetic needle had been used by the mariners of western and northern Europe since the end of the thirteenth century.

[2] "Fanno nauigli e nauigano, ma non hanno la calamita ne intendeno col bossolo la tramontana. Per ilche questi pescatori furono in gran pregio, si che il re li spedì con dodici nauigli uerso ostro nel paese che essi chiamano Drogio." Major, *op. cit.* p. 21.

so that he was passed about among more than twenty chiefs, and "wandering up and down the country without any fixed abode, . . . he became acquainted with all those parts."

Inhabitants of Drogio and the countries beyond.

And now comes quite an interesting passage. The Fisherman "says that it is a very great country, and, as it were, a new world; the people are very rude and uncultivated, for they all go naked, and suffer cruelly from the cold, nor have they the sense to clothe themselves with the skins of the animals which they take in hunting [a gross exaggeration]. They have no kind of metal. They live by hunting, and carry lances of wood, sharpened at the point. They have bows, the strings of which are made of beasts' skins. They are very fierce, and have deadly fights amongst each other, and eat one another's flesh. They have chieftains and certain laws among themselves, but differing in the different tribes. The farther you go southwestwards, however, the more refinement you meet with, because the climate is more temperate, and accordingly there they have cities and temples dedicated to their idols, in which they sacrifice men and afterwards eat them. In those parts they have some knowledge and use of gold and silver. Now this Fisherman, having dwelt so many years in these parts, made up his mind, if possible, to return home to his own country; but his companions, despairing of ever seeing it again, gave him God's speed, and remained themselves where they were. Accordingly, he bade them farewell, and made his escape through the woods in the direction of

Drogio, where he was welcomed and very kindly received by the chief of the place, who knew him, and was a great enemy of the neighbouring chieftain; and so passing from one chief to another, being the same with whom he had been before, after a long time and with much toil, he at length reached Drogio, where he spent three years. Here, by good luck, he heard from the natives that some boats had arrived off the coast; and full of hope of being able to carry out his intention, he went down to the seaside, and to his great delight found that they had come from Estotiland. He forthwith requested that they would take him with them, which they did very willingly, and as he knew the language of the country, which none of them could speak, they employed him as their interpreter."[1]

Whither the Fisherman was first carried in these boats or vessels, Antonio's letter does not inform us. We are only told that he engaged in some prosperous voyages, and at length returned to the Færoes after these six and twenty years of strange adventures. It was apparently the Fisherman's description of Estotiland as a very rich country (*paese ricchissimo*) that led Sinclair to fit out an expedition to visit it, with Antonio as his chief captain. As we have already seen, the Fisherman died just before the ships were ready to start, and to whatever land they succeeded in reaching after they sailed without him, the narrative leaves us with the impression that it was not the mysterious Estotiland.

The Fisherman's return to "Frislanda."

[1] Major, *op. cit.* pp. 20–22.

To attempt to identify that country from the description of it, which reads like a parcel of ill-digested sailors' yarns, would be idle. The most common conjecture has identified it with Newfoundland, from its relations to other points mentioned in the Zeno narrative, as indicated, with fair probability, on the Zeno map. To identify it with Newfoundland is to brand the description as a "fish story," but from such a conclusion there seems anyway to be no escape.

With Drogio, however, it is otherwise. The description of Drogio and the vast country stretching beyond it, which was like a "new world," is the merest sketch, but it seems to contain enough characteristic details to stamp it as a description of North America, and of no other country accessible by an Atlantic voyage. It is a sketch which apparently must have had its ultimate source in somebody's personal experience of aboriginal North America. Here we are reminded that when the younger Nicolò published this narrative, in 1558, some dim knowledge of the North American tribes was beginning to make its way into the minds of people in Europe. The work of Soto and Cartier, to say nothing of other explorers, had already been done. May we suppose that Nicolò had thus obtained some idea of North America, and wove it into his reproduction of his ancestors' letters, for the sake of completeness and point, in somewhat the same uncritical mood as that in which the most worthy ancient historians did not scruple to invent speeches to put into the mouths of their heroes?

Was the account of Drogio woven into the narrative by the younger Nicolò?

It may have been so, and in such case the description of Drogio loses its point for us as a feature in the pre-Columbian voyages to America. In such case we may dismiss it at once, and pretty much all the latter part of the Zeno narrative, relating to what Antonio heard and did, becomes valueless; though the earlier part, relating to the elder Nicolò, still remains valid and trustworthy.

But suppose we take the other alternative. As in the earlier part of the story we feel sure that young Nicolò must have reproduced the ancestral documents faithfully, because it shows knowledge that he could not have got in any other way; let us now suppose that in the latter part also he added nothing of himself, but was simply a faithful editor. It will then follow that the Fisherman's account of Drogio, reduced to writing by Antonio Zeno about 1400, must probably represent personal experiences in North America; for no such happy combination of details characteristic only of North America is likely at that date to have been invented by any European. Our simplest course will be to suppose that the Fisherman really had the experiences which are narrated, that he was bandied about from tribe to tribe in North America, all the way, perhaps, from Nova Scotia to Mexico, and yet returned to the Færoe islands to tell the tale! Could such a thing be possible? Was anything of the sort ever done before or since?

Or does it represent actual experiences in North America?

Yes: something of the sort appears to have been done about ten years after the Zeno narrative was published. In October, 1568, that great

sailor, Sir John Hawkins, by reason of scarcity of food, was compelled to set about a hundred men ashore near the Rio de Minas, on the Mexican coast, and leave them to their fate. The continent was a network of rude paths or trails, as it had doubtless been for ages, and as central Africa is to-day. Most of these Englishmen probably perished in the wilderness. Some who took southwesterly trails found their way to the city of Mexico, where, as "vile Lutheran dogges," they were treated with anything but kindness. Others took northeasterly trails, and one of these men, David Ingram, made his way from Texas to Maine, and beyond to the St. John's river, where he was picked up by a friendly French ship and carried to France, and so got home to England. The journey across North America took him about eleven months, but one of his comrades, Job Hortop, had no end of adventures, and was more than twenty years in getting back to England. Ingram told such blessed yarns about houses of crystal and silver, and other wonderful things, that many disbelieved his whole story, but he was subjected to a searching examination before Sir Francis Walsingham, and as to the main fact of his journey through the wilderness there seems to be no doubt.[1]

The case of David Ingram, 1568.

[1] Ingram's narrative was first published in Hakluyt's folio of 1589, pp. 557–562, but in his larger work, *Principal Navigations*, etc., London, 1600, it is omitted. As Purchas quaintly says, "As for David Ingram's perambulation to the north parts, Master Hakluyt in his first edition published the same; but it seemeth some incredibilities of his reports caused him to leaue him out in the next impression, the reward of lying being not to be beleeued

Far more important, historically, and in many ways more instructive than the wanderings of David Ingram, was the journey of Cabeza de Vaca and his ingenious comrades, in 1528–36, from the Mississippi river to their friends in Mexico. This remarkable journey will receive further consideration in another place.[1] In the course of it Cabeza de Vaca was for eight years held captive by sundry Indian tribes, and at last his escape involved ten months of arduous travel. On one occasion he and his friends treated some sick Indians, among other things breathing upon them and making the sign of the cross. As the Indians happened to get well, these Spaniards at once became objects of reverence, and different tribes vied with one another for access to them, in order to benefit by their supernatural gifts. In those early days, before the red men had become used to seeing Europeans, a white captive was not so likely to be put to death as to be cherished as a helper of vast and

The case of Cabeza de Vaca, 1528–36.

In truths." *Purchas his Pilgrimes*, London, 1625, vol. iv. p. 1179. The examination before Walsingham had reference to the projected voyage of Sir Humphrey Gilbert, which was made in 1583. Ingram's relation, "wch he reported vnto Sr Frauncys Walsinghm̃, Knight, and diuers others of good judgment and creditt, in August and Septembar, Ao Dñi, 1582," is in the British Museum, Sloane MS. No. 1447, fol. 1–18; it was copied and privately printed in Plowden Weston's *Documents connected with the History of South Carolina*, London, 1856. There is a MS. copy in the Sparks collection in the Harvard University library. See the late Mr. Charles Deane's note in his edition of Hakluyt's *Discourse concerning Westerne Planting*, Cambridge, 1877, p. 229 (*Collections of Maine Hist. Soc.*, 2d series, vol. ii.); see, also, Winsor, *Narr. and Crit. Hist.*, iii. 186.

[1] See below, vol. ii. p. 501.

undetermined value.[1] The Indians set so much store by Cabeza de Vaca that he found it hard to tear himself away; but at length he used his influence over them in such wise as to facilitate his moving in a direction by which he ultimately succeeded in escaping to his friends. There seems to be a real analogy between his strange experiences and those of the Fisherman in Drogio, who became an object of reverence because he could do things that the natives could not do, yet the value of which they were able to appreciate.

Now if the younger Nicolò had been in the mood for adorning his ancestors' narrative by inserting a few picturesque incidents out of his own hearsay knowledge of North America, it does not seem likely that he would have known enough to hit so deftly upon one of the peculiarities of the barbaric mind. Here, again, we seem to have come upon one of those incidents, inherently probable, but too strange to have been invented, that tend to confirm the story. Without hazarding anything like a positive opinion, it seems to me likely enough that this voyage of Scandinavian fishermen to the coast of North America in the fourteenth century may have happened.

There may have been unrecorded instances of visits to North America.

It was this and other unrecorded but possible instances that I had in mind at the beginning of this chapter, in saying that occasional visits of Europeans to America in pre-Columbian times may have occurred oftener than we are wont to suppose. Ob-

[1] In the first reception of the Spaniards in Peru, we shall see a similar idea at work, vol. ii. pp. 398, 407.

serve that our scanty records — naturally somewhat perplexed and dim, as treating of remote and unknown places — refer us to that northern Atlantic region where the ocean is comparatively narrow, and to that northern people who, from the time of their first appearance in history, have been as much at home upon sea as upon land. For a thousand years past these hyperborean waters have been furrowed in many directions by stout Scandinavian keels, and if, in aiming at Greenland, the gallant mariners may now and then have hit upon Labrador or Newfoundland, and have made flying visits to coasts still farther southward, there is nothing in it all which need surprise us.[1]

The pre-Columbian voyages made no real contributions to geographical knowledge;

Nothing can be clearer, however, from a survey of the whole subject, than that these pre-Columbian voyages were quite barren of results of historic importance. In point of colonization they produced the two ill-fated settlements on the Greenland coast, and nothing more. Otherwise they made no real addition to the stock of geographical knowledge, they wrought no effect whatever upon the European mind outside of Scandi-

[1] The latest pre-Columbian voyage mentioned as having occurred in the northern seas was that of the Polish pilot Johr Szkolny, who, in the service of King Christian I. of Denmark, i. said to have sailed to Greenland in 1476, and to have touched upon the coast of Labrador. See Gomara, *Historia de las Indias*, Saragossa, 1553, cap. xxxvii.; Wytfliet, *Descriptionis Ptolemaicæ Augmentum*, Douay, 1603, p. 102; Pontanus, *Rerum Danicarum Historia*, Amsterdam, 1631, p. 763. The wise Humboldt mentions the report without expressing an opinion, *Examen critique*, tom. ii. p. 153.

navia, and even in Iceland itself the mention of coasts beyond Greenland awakened no definite ideas, and, except for a brief season, excited no interest. The Zeno narrative indicates that the Vinland voyages had practically lapsed from memory before the end of the fourteenth century.[1] Scholars familiar with saga literature of course knew the story; it was just at this time that Jón Thórdharson wrote out the version of it which is preserved in the Flateyar-bók. But by the general public it must have been forgotten, or else the Fisherman's tale of Estotiland and Drogio would surely have awakened reminiscences of Markland and Vinland, and some traces of this would have appeared in Antonio's narrative or upon his map. The principal naval officer of the Færoes, and personal friend of the sovereign, after dwelling several years among these Northmen, whose intercourse with their brethren in Iceland was frequent, apparently knew nothing of Leif or Thorfinn, or the mere names of the coasts which they had visited. Nothing had been accomplished by those voyages which could properly be called a contribution to geographical knowledge. To speak of them as constituting, in any legitimate sense of the phrase, a Discovery of America is simply absurd. Except for Greenland, which was supposed to be a part of the European world, America remained as much undiscovered after the eleventh century as before.

and were in no true sense a Discovery of America.

[1] Practically, but not entirely, for we have seen Markland mentioned in the "Elder Skálholt Annals," about 1362. See above, p. 223.

In the midsummer of 1492 it needed to be discovered as much as if Leif Ericsson or the whole race of Northmen had never existed.

As these pre-Columbian voyages produced no effect in the eastern hemisphere, except to leave in Icelandic literature a scanty but interesting record, so in the western hemisphere they seem to have produced no effect beyond cutting down a few trees and killing a few Indians. In the outlying world of Greenland it is not improbable that the blood of the Eskimos may have received some slight Scandinavian infusion. But upon the aboriginal world of the red men, from Davis strait to Cape Horn, it is not likely that any impression of any sort was ever made. It is in the highest degree probable that Leif Ericsson and his friends made a few voyages to *what we now know to have been* the coast of America; but it is an abuse of language to say that they "discovered" America. In no sense was any real contact established between the eastern and the western halves of our planet until the great voyage of Columbus in 1492.

CHAPTER III.

EUROPE AND CATHAY.

The question has sometimes been asked, Why did the knowledge of the voyages to Vinland so long remain confined to the Scandinavian people or a portion of them, and then lapse into oblivion, insomuch that it did not become a matter of notoriety in Europe until after the publication of the celebrated book of Thormodus Torfæus in 1705? Why did not the news of the voyages of Leif and Thorfinn spread rapidly over Europe, like the news of the voyage of Columbus? and why was it not presently followed, like the latter, by a rush of conquerors and colonizers across the Atlantic?

Why the voyages of the Northmen were not followed up.

Such questions arise from a failure to see historical events in their true perspective, and to make the proper allowances for the manifold differences in knowledge and in social and economic conditions which characterize different periods of history. In the present case, the answer is to be found, first, in the geographical ignorance which prevented the Northmen from realizing in the smallest degree what such voyages really signified or were going to signify to posterity; and, secondly, in the political and commercial condition of Europe at the close of the tenth century.

In the first place the route which the Norse voyagers pursued, from Iceland to Greenland and thence to Vinland, was not such as to give them, in their ignorance of the shape of the earth, and with their imperfect knowledge of latitude and longitude, any adequate gauge wherewith to measure their achievement. The modern reader, who has in his mind a general picture of the shape of the northern Atlantic ocean with its coasts, must carefully expel that picture before he can begin to realize how things must have seemed to the Northmen. None of the Icelandic references to Markland and Vinland betray a consciousness that these countries belong to a geographical world outside of Europe. There was not enough organized geographical knowledge for that. They were simply conceived as remote places beyond Greenland, inhabited by inferior but dangerous people. The accidental finding of such places served neither to solve any great commercial problem nor to gratify and provoke scientific curiosity. It was, therefore, not at all strange that it bore no fruit.

Ignorance of geography.

Secondly, even if it had been realized, and could have been duly proclaimed throughout Europe, that across the broad Atlantic a new world lay open for colonization, Europe could not have taken advantage of the fact. Now and then a ship might make its way, or be blown, across the waste of waters without compass or astrolabe; but until these instruments were at hand anything like systematic ocean navigation was out of the question; and

Lack of instruments for ocean navigation.

from a colonization which could only begin by creeping up into the Arctic seas and taking Greenland on the way, not much was to be expected, after all.

But even if the compass and other facilities for oceanic navigation had been at hand, the state of Europe in the days of Eric the Red was not such as to afford surplus energy for distant enterprise of this sort. Let us for a moment recall what was going on in Europe in the year of grace 1000, just enough to get a suggestive picture of the time. In England the Danish invader, fork-bearded Swend, father of the great Cnut, was wresting the kingship from the feeble grasp of Ethelred the Redeless. In Gaul the little duchy of France, between the Somme and the Loire, had lately become the kingdom of France, and its sovereign, Hugh Capet, had succeeded to feudal rights of lordship over the great dukes and counts whose territories surrounded him on every side; and now Hugh's son, Robert the Debonair, better hymn-writer than warrior, was waging a doubtful struggle with these unruly vassals. It was not yet in any wise apparent what the kingdoms of England and France were going to be. In Germany the youthful Otto III., the "wonder of the world," had just made his weird visit to the tomb of his mighty predecessor at Aachen, before starting on that last journey to Rome which was so soon to cost him his life. Otto's teacher, Gerbert, most erudite of popes, — too learned not to have had dealings with the Devil, — was beginning to raise the

Europe in the year 1000.

papacy out of the abyss of infamy into which the preceding age had seen it sink, and so to prepare the way for the far-reaching reforms of Hildebrand. The boundaries of Christendom were as yet narrow and insecure. With the overthrow of Olaf Tryggvesson in this year 1000, and the temporary partition of Norway between Swedes and Danes, the work of Christianizing the North seemed, for the moment, to languish. Upon the eastern frontier the wild Hungarians had scarcely ceased to be a terror to Europe, and in this year Stephen, their first Christian king, began to reign. At the same time the power of heretical Bulgaria, which had threatened to overwhelm the Eastern Empire, was broken down by the sturdy blows of the Macedonian emperor Basil. In this year the Christians of Spain met woful defeat at the hands of Almansor, and there seemed no reason why the Mussulman rule over the greater part of that peninsula should not endure forever.

Thus, from end to end, Europe was a scene of direst confusion, and though, as we now look back upon it, the time seems by no means devoid of promise, there was no such cheering outlook then. Nowhere were the outlines of kingdoms or the ownership of crowns definitely settled. Private war was both incessant and universal; the Truce of God had not yet been proclaimed.[1] As for the

[1] The "Truce of God" (*Treuga Dei*) was introduced by the clergy in Guienne about 1032; it was adopted in Spain before 1050, and in England by 1080. See Datt, *De pace imperii publica*, lib. i. cap. ii. A cessation of all violent quarrels was enjoined, under ecclesiastical penalties, during church festivals, and from every Wednesday evening until the following Monday morning.

common people, their hardships were well-nigh incredible. Amid all this anarchy and misery, at the close of the thousandth year from the birth of Christ, the belief was quite common throughout Europe that the Day of Judgment was at hand for a world grown old in wickedness and ripe for its doom.

It hardly need be argued that a period like this, in which all the vital energy in Europe was consumed in the adjustment of affairs at home, was not fitted for colonial enterprises. Before a people can send forth colonies it must have solved the problem of political life so far as to ensure stability of trade. It is the mercantile spirit that has supported modern colonization, aided by the spirit of intellectual curiosity and the thirst for romantic adventure.

The condition of things was not such as to favour colonial enterprise.

In the eleventh century there was no intellectual curiosity outside the monastery walls, nor had such a feeling become enlisted in the service of commerce. Of trade there was indeed, even in western Europe, a considerable amount, but the commercial marine was in its infancy, and on land the trader suffered sorely at the hands of the robber baron. In those days the fashionable method of compounding with your creditors was, not to offer them fifty cents on the dollar, but to inveigle them into your castle and broil them over a slow fire.

In so far as the attention of people in Europe

This left only about eighty days in the year available for shooting and stabbing one's neighbours. The truce seems to have accomplished much good, though it was very imperfectly observed.

was called to any quarter of the globe outside of the seething turbulence in which they dwelt, it was directed toward Asia. Until after 1492, Europe stood with her back toward the Atlantic. What there might be out beyond that "Sea of Darkness" (*Mare Tenebrosum*), as it used commonly to be called, was a question of little interest and seems to have excited no speculation. In the view of mediæval Europe the inhabited world was cut off on the west by this mysterious ocean, and on the south by the burning sands of Sahara; but eastward it stretched out no one knew how far, and in that direction dwelt tribes and nations which Europe, from time immemorial, had reason to fear. As early as the time of Herodotus, the secular antagonism between Europe and Asia had become a topic of reflection among the Greeks, and was wrought with dramatic effect by that great writer into the structure of his history, culminating in the grand and stirring scenes of the Persian war. A century and a half later the conquests of Alexander the Great added a still more impressive climax to the story. The struggle was afterward long maintained between Roman and Parthian, but from the fifth century after Christ onward through the Middle Ages, it seemed as if the Oriental world would never rest until it had inflicted the extremities of retaliation upon Europe. Whether it was the heathen of the steppes who were in question, from Attila in the fifth century to Batu Khan in the thirteenth, or the followers of the Prophet, who tore away from Christendom the southern

The outlook of Europe was toward Asia.

shores of the Mediterranean, and held Spain in their iron grasp, while from age to age they exhausted their strength in vain against the Eastern Empire, the threatening danger was always coming with the morning sun; whatever might be the shock that took the attention of Europe away from herself, it directed it upon Asia. This is a fact of cardinal importance for us, inasmuch as it was directly through the interest, more and more absorbing, which Europe felt in Asia that the discovery of the western hemisphere was at last effected.

It was not only in war, but in commerce, that the fortunes of Europe were dependent upon her relations with Asia. Since prehistoric times there has always been some commercial intercourse between the eastern shores of the Mediterranean and the peninsula of Hindustan. Tyre and Sidon carried on such trade by way of the Red Sea.[1] After Alexander had led his army to Samarcand and to the river Hyphasis, the acquaintance of the Greeks with Asia was very considerably increased, and important routes of trade were established. One was practically the old Phœnician route, with its western terminus moved from Tyre to Alexandria. Another was by way of the Caspian sea, up the river Oxus, and thence with camels to the banks of the Indus.[2] An intermediate route was through Syria and by way of the Euphrates and the Persian gulf; the route which at one time made the

Routes of trade between Europe and Asia.

[1] Diodorus Siculus, i. 70.

[2] Strabo, xi. 7, § 3.

greatness of Palmyra. After the extension of Roman sway to the Nile, the Euphrates, and the Euxine, these same routes continued to be used. The European commodities carried to India were light woollen cloths, linens, coral, black lead, various kinds of glass vessels, and wine. In exchange for these the traders brought back to Europe divers aromatic spices, black pepper, ivory, cotton fabrics, diamonds, sapphires, and pearls, silk thread and silk stuffs.[1] Detailed accounts of these commercial transactions, and of the wealth of personal experiences that must have been connected with them, are excessively scant. Of the Europeans who, during all the centuries between Alexander and Justinian, made their way to Hindustan or beyond, we know very few by name. The amount of geographical information that was gathered during the first half of this period is shown in the map representing Claudius Ptolemy's knowledge of the earth, about the middle of the second century after Christ. Except for the Scandinavian world, and some very important additions made to the knowledge of Asia by Marco Polo, this map fairly represents the maximum of acquaintance with the earth's surface possessed by Europeans previous to the great voyages of the fifteenth century. It shows a dim knowledge of the mouths of the Ganges, of the island of

Claudius Ptolemy.

[1] Robertson, *Historical Disquisition concerning the Knowledge which the Ancients had of India*, Dublin, 1791, p. 55. I never have occasion to consult Dr. Robertson without being impressed anew with his scientific habit of thought and the solidity of his scholarship; and in none of his works are these qualities better illustrated than in this noble essay.

Ceylon, and of what we sometimes call Farther India. A very dim knowledge, indeed; for the huge peninsula of Hindustan is shrunk into insignificance, while Taprobane, or Ceylon, unduly magnified, usurps the place belonging to the Deccan. At the same time we see that some hearsay knowledge of China had made its way into the Roman world before the days of Ptolemy. The two names by which China was first known to Europeans were "Seres" or "Serica," and "Sinæ" or "Thin." These two differing names are the records of two different methods of approach to different parts of a vast country, very much as the Northmen called their part of eastern North America "Vinland," while the Spaniards called their part "Florida." The name "Seres" was given to northwestern China by traders who approached it through the highlands of central Asia from Samarcand, while "Sinæ" was the name given to southeastern China by traders who approached it by way of the Indian ocean, and heard of it in India, but never reached it. Apparently no European ships ever reached China before the Portuguese, in 1517.[1] The name "Sinæ" or "Thin" seems to mean the country of the "Tchin" dynasty, which ruled over the whole of China in the second century before Christ, and over a portion of it for a much longer time. The name "Seres," on the other hand, was always associated with the trade in silks, and was known

Early mention of China.

[1] The Polos sailed back from China to the Persian gulf in 1292–94; see below, p. 282.

CLAUDIUS PTOL

INCOGNITA
SCYTHIA EXTRA IMAUM
SCYTHIA INTRA IMAUM
SOGDIANA
BACTRIANA
ARIA
INDIA CIS GANGEM
INDIA TRANS GANGEM
GANGES
SINUS GANGETICUS
MAGNUS SINUS
TAPROBANE
CATTIGARA
OCEANUS
Mare

LD, CIR. A. D. 150.

to the Romans in the time of the Emperor Claudius,[1] and somewhat earlier. The Romans in Virgil's time set a high value upon silk, and every scrap of it they had came from China. They knew nothing about the silk-worm, and supposed that the fibres or threads of this beautiful stuff grew upon trees. Of actual intercourse between the Roman and Chinese empires there was no more than is implied in this current of trade, passing through many hands. But that each knew, in a vague way, of the existence of the other, there is no doubt.[2]

In the course of the reign of Justinian, we get references at first hand to India, and coupled withal to a general theory of cosmography. This curious information we have in the book of the monk Cosmas Indicopleustes, written somewhere between A. D. 530 and 550. A pleasant book it is, after its kind. In his younger days Cosmas had been a merchant, and in divers voyages had become familiar with the coasts of Ethiopia and the Persian gulf, and had visited India and Ceylon. After becoming a monk at Alexandria, Cosmas wrote his book of Christian

Cosmas Indicopleustes.

[1] The name "Seres" appears on the map of Pomponius Mela (cir. A. D. 50), while "Sinæ" does not. See below, p. 304.

> Jam Tartessiaco quos solverat æquore Titan
> In noctem diffusus equos, jungebat Eoïs
> Littoribus, primique novo Phaethonte retecti
> Seres lanigeris repetebant vellera lucis.
> Silius Italicus, lib. vi. *ad init.*

[2] For this whole subject see Colonel Sir Henry Yule's *Cathay and the Way Thither*, London, 1866, 2 vols., — a work of profound learning and more delightful than a novel.

geography,[1] maintaining, in opposition to Ptolemy, that the earth is not a sphere, but a rectangular plane forming the floor of the universe; the heavens rise on all four sides about this rectangle, like the four walls of a room, and, at an indefinite height above the floor, these blue walls support a vaulted roof or firmament, in which God dwells with the angels. In the centre of the floor are the inhabited lands of the earth, surrounded on all sides by a great ocean, beyond which, somewhere out in a corner, is the Paradise from which Adam and Eve were expelled. In its general shape, therefore, the universe somewhat resembles the Tabernacle in the Wilderness, or a modern "Saratoga

Shape of the earth, according to Cosmas.

[1] Its title is Χριστιανῶν βίβλος, ἑρμηνεία εἰς τὴν Οκτάτευχον, i. e. against Ptolemy's Geography in eight books. The name Cosmas Indicopleustes seems merely to mean "the cosmographer who has sailed to India." He begins his book in a tone of extreme and somewhat unsavory humility: Ἀνοίγω τὰ μογιλάλα καὶ βραδύγλωσσα χείλη ὁ ἁμαρτωλὸς καὶ τάλας ἐγώ — "I, the sinner and wretch, open my stammering, stuttering lips," etc. — The book has been the occasion of some injudicious excitement within the last half century. Cosmas gave a description of some comparatively recent inscriptions on the peninsula of Sinai, and because he could not find anybody able to read them, he inferred that they must be records of the Israelites on their passage through the desert. (Compare the Dighton rock, above, p. 214.) Whether in the sixth century of grace or in the nineteenth, your unregenerate and unchastened antiquary snaps at conclusions as a drowsy dog does at flies. Some years ago an English clergyman, Charles Forster, started up the nonsense again, and argued that these inscriptions might afford a clue to man's primeval speech! Cf. Bunsen, *Christianity and Mankind*, vol. iii. p. 231; Müller and Donaldson, *History of Greek Literature*, vol. iii. p. 353; Bury, *History of the Later Roman Empire from Arcadius to Irene*, vol. ii. p. 177.

trunk." On the northern part of the floor, under the firmament, is a lofty conical mountain, around which the sun, moon, and planets perform their daily revolutions. In the summer the sun takes a turn around the apex of the cone, and is, therefore, hidden only for a short night; but in the winter he travels around the base, which takes longer, and, accordingly, the nights are long. Such is the doctrine drawn from Holy Scripture, says Cosmas, and as for the vain blasphemers who pretend that the earth is a round ball, the Lord hath stultified them for their sins until they impudently prate of Antipodes, where trees grow downward and rain falls upward. As for such nonsense, the worthy Cosmas cannot abide it.

I cite these views of Cosmas because there can be no doubt that they represent beliefs current among the general public until after the time of Columbus,[1] in spite of the deference paid to Ptol-

[1] Such views have their advocates even now. There still lives, I believe, in England, a certain John Hampden, who with dauntless breast maintains that the earth is a circular plane with centre at the north pole and a circumference of nearly 30,000 miles where poor misguided astronomers suppose the south pole to be. The sun moves across the sky at a distance of about 800 miles. From the boundless abyss beyond the southern circumference, with its barrier of icy mountains, came the waters which drowned the antediluvian world; for, as this author quite reasonably observes, "on a globular earth such a deluge would have been physically impossible." Hampden's title is somewhat like that of Cosmas, — *The New Manual of Biblical Cosmography*, London, 1877; and he began in 1876 to publish a periodical called *The Truth-Seeker's Oracle and Scriptural Science Review*. Similar views have been set forth by one Samuel Rowbotham, under the pseudonym of "Parallax," *Zetetic Astronomy. Earth not a Globe. An experimental inquiry into the true figure of the earth, proving it a plane without orbital or axial motion*, etc., London, 1873; and by a William

emy's views by the learned. Along with these cosmographical speculations, Cosmas shows a wider geographical knowledge of Asia than any earlier writer. He gives a good deal of interesting information about India and Ceylon, and has a fairly correct idea of the position of China, which he calls Tzinista or Chinistan. This land of silk is the remotest of all the Indies, and beyond it "there is neither navigation nor inhabited country. . . . And the Indian philosophers, called Brachmans, tell you that if you were to stretch a straight cord from Tzinista through Persia to the Roman territory, you would just divide the world in halves. And mayhap they are right." [1]

The Nestorians.

In the fourth and following centuries, Nestorian missionaries were very active in Asia, and not only made multitudes of converts and established metropolitan sees in such places as Kashgar and Herat, but even found their

Carpenter, *One Hundred Proofs that the Earth is not a Globe*, Baltimore, 1885. There is a very considerable quantity of such literature afloat, the product of a kind of mental aberration that thrives upon paradox. When I was superintendent of the catalogue of Harvard University library, I made the class "Eccentric Literature" under which to group such books, — the lucubrations of circle-squarers, angle-trisectors, inventors of perpetual motion, devisers of recipes for living forever without dying, crazy interpreters of Daniel and the Apocalypse, upsetters of the undulatory theory of light, the Bacon-Shakespeare lunatics, etc.; a dismal procession of long-eared bipeds, with very raucous bray. The late Professor De Morgan devoted a bulky and instructive volume to an account of such people and their crotchets. See his *Budget of Paradoxes*, London, 1872.

[1] Cosmas, ii. 138. Further mention of China was made early in the seventh century by Theophylactus Samocatta, vii. 7. See Yule's *Cathay*, vol. i. pp. xlix., clxviii.

way into China. Their work forms an interesting though melancholy chapter in history, but it does not seem to have done much toward making Asia better known to Europe. As declared heretics, the Nestorians were themselves almost entirely cut off from intercourse with European Christians.

The immediate effect of the sudden rise of the vast Saracen empire, in the seventh and eighth centuries, was to interpose a barrier to the extension of intercourse between Europe and the Far East. Trade between the eastern and western extremities of Asia went on more briskly than ever, but it was for a long time exclusively in Mussulman hands. The mediæval Arabs were bold sailors, and not only visited Sumatra and Java, but made their way to Canton. Upon the southern and middle routes the Arab cities of Cairo and Bagdad became thriving centres of trade; but as Spain and the whole of northern Africa were now Arab countries, most of the trade between east and west was conducted within Mussulman boundaries. Saracen cruisers prowled in the Mediterranean and sorely harassed the Christian coasts. During the eighth, ninth, and tenth centuries, Europe was more shut in upon herself than ever before or since. In many respects these were especially the dark ages of Europe, — the period of least comfort and least enlightenment since the days of pre-Roman barbarism. But from this general statement Constantinople should be in great measure excepted. The current of mediæval trade through the noble highway of the Dardanelles and the Bosphorus

Effects of the Saracen conquests.

was subject to fluctuations, but it was always great. The city of the Byzantine emperors was before all things a commercial city, like Venice in later days. Until the time of the Crusades Constantinople was the centre of the Levant trade.

Constantinople in the twelfth century.

The great northern route from Asia remained available for commercial intercourse in this direction. Persian and Armenian merchants sent their goods to Batoum, whence they were shipped to Constantinople; and silk was brought from northwestern China by caravan to the Oxus, and forwarded thence by the Caspian sea, the rivers Cyrus and Phasis, and the Euxine sea.[1] When it was visited by Benjamin of Tudela in the twelfth century, Constantinople was undoubtedly the richest and most magnificent city, and the seat of the highest civilization, to be found anywhere upon the globe.

In the days of its strength the Eastern Empire was the staunch bulwark of Christendom against the dangerous assaults of Persian, Saracen, and Turk; alike in prosperity and in calamity, it proved to be the teacher and civilizer of the western world. The events which, at the close of the eleventh century, brought thousands upon thousands of adventurous, keen-witted people from

The Crusades.

western Europe into this home of wealth and refinement, were the occasion of the most remarkable intellectual awakening that the world had ever witnessed up to that time. The Crusades, in their beginning, were a symptom of

[1] Robertson, *Historical Disquisition*, p. 93; Pears, *The Fall of Constantinople*, p. 177, — a book of great merit.

the growing energy of western Europe under the ecclesiastical reformation effected by the mighty Hildebrand. They were the military response of Europe to the most threatening, and, as time has proved, the most deadly of all the blows that have ever been aimed at her from Asia. Down to this time the Mahometanism with which Christendom had so long been in conflict was a Mahometanism of civilized peoples. The Arabs and Moors were industrious merchants, agriculturists, and craftsmen; in their society one might meet with learned scholars, refined poets, and profound philosophers. But at the end of the tenth century, Islam happened to make converts of the Turks, a nomad race in the upper status of barbarism, with flocks and herds and patriarchal families. Inspired with the sudden zeal for conquest which has always characterized new converts to Islam, the Turks began to pour down from the plains of central Asia like a deluge upon the Eastern Empire. In 1016 they overwhelmed Armenia, and presently advanced into Asia Minor. Their mode of conquest was peculiarly baleful, for at first they deliberately annihilated the works of civilization in order to prepare the country for their nomadic life; they pulled down cities to put up tents. Though they long ago ceased to be nomads, they have to this day never learned to comprehend civilized life, and they have been simply a blight upon every part of the earth's surface which they have touched. At the beginning of the eleventh century, Asia Minor was one of the most prosperous and highly civilized parts of

Barbarizing character of Turkish conquest.

the world;[1] and the tale of its devastation by the terrible Alp Arslan and the robber chiefs that came after him is one of the most mournful chapters in history. At the end of that century, when the Turks were holding Nicæa and actually had their outposts on the Marmora, it was high time for Christendom to rise *en masse* in self-defence. The idea was worthy of the greatest of popes. Imperfectly and spasmodically as it was carried out, it undoubtedly did more than anything that had ever gone before toward strengthening the wholesome sentiment of a common Christendom among the peoples of western Europe.

General effects of the Crusades.

The Crusades increased the power of the Church, which was equivalent to putting a curb upon the propensities of the robber baron and making labour and traffic more secure. In another way they aided this good work by carrying off the robber baron in large numbers to Egypt and Syria, and killing him there. In this way they did much toward ridding European society of its most turbulent elements; while at the same time they gave fresh development to the spirit of romantic adventure, and connected it with something better than vagrant freebooting.[2] By renewing the long-sus-

[1] "It is difficult for the modern traveller who ventures into the heart of Asia Minor, and finds nothing but rude Kurds and Turkish peasants living among mountains and wild pastures, not connected even by ordinary roads, to imagine the splendour and rich cultivation of this vast country, with its brilliant cities and its teeming population." Mahaffy, *The Greek World under Roman Sway*, London, 1890, p. 229.

[2] The general effects of the Crusades are discussed, with much learning and sagacity, by Choiseul-Daillecourt, *De l'Influence des Croisades sur l'état des peuples de l'Europe*, Paris, 1809.

pended intercourse between the minds of western Europe and the Greek culture of Constantinople, they served as a mighty stimulus to intellectual curiosity, and had a large share in bringing about that great thirteenth century renaissance which is forever associated with the names of Giotto and Dante and Roger Bacon.

There can be no doubt that in these ways the Crusades were for our forefathers in Europe the most bracing and stimulating events that occurred in the whole millennium between the complicated disorders of the fifth century and the outburst of maritime discovery in the fifteenth. How far they justified themselves from the military point of view, it is not so easy to say. On the one hand, they had much to do with retarding the progress of the enemy for two hundred years; they overwhelmed the Seljukian Turks so effectually that their successors, the Ottomans, did not become formidable until about 1300, after the last crusading wave had spent its force. On the other hand, the Fourth Crusade, with better opportunities than any of the others for striking a crushing blow at the Moslem, played false to Christendom, and in 1204 captured and despoiled Constantinople in order to gratify Venice's hatred of her commercial rival and superior. It was a sorry piece of business, and one cannot look with unmixed pleasure at the four superb horses that now adorn the front of the church of St. Mark as a trophy of this unhallowed exploit.[1] One can-

The Fourth Crusade.

[1] They were taken from Chios in the fourth century by the emperor Theodosius, and placed in the hippodrome at Constanti-

not help feeling that but for this colossal treachery, the great city of Constantine, to which our own civilization owes more than can ever be adequately told, might, perhaps, have retained enough strength to withstand the barbarian in 1453, and thus have averted one of the most lamentable catastrophes in the history of mankind.

The general effect of the Crusades upon Oriental commerce was to increase the amount of traffic through Egypt and Syria. Of this lucrative trade Venice got the lion's share, and while she helped support the short-lived Latin dynasty upon the throne at Constantinople, she monopolized a great part of the business of the Black Sea also. But in 1261 Venice's rival, Genoa, allied herself with the Greek emperor, Michael Palæologus, at Nicæa, placed him upon the Byzantine throne, and again cut off Venice from the trade that came through the Bosphorus. From this time forth the mutual hatred between Venice and Genoa "waxed fiercer than ever; no merchant fleet of either state could go to sea without convoy, and wherever their ships met they fought. It was something like the

Rivalry between Venice and Genoa.

nople, whence they were taken by the Venetians in 1204. The opinion that "the results of the Fourth Crusade upon European civilization were altogether disastrous" is ably set forth by Mr. Pears, *The Fall of Constantinople*, London, 1885, and would be difficult to refute. Voltaire might well say in this case, "Ainsi le seul fruit des chrétiens dans leurs barbares croisades fut d'exterminer d'autres chrétiens. Ces croisés, qui ruinaient l'empire auraient pu, bien plus aisément que tous leurs prédecesseurs, chasser les Turcs de l'Asie." *Essai sur les Mœurs*, tom. ii. p. 158. Voltaire's general view of the Crusades is, however, very superficial.

state of things between Spain and England in the days of Drake."[1] In the one case as in the other, it was a strife for the mastery of the sea and its commerce. Genoa obtained full control of the Euxine, took possession of the Crimea, and thus acquired a monopoly of the trade from central Asia along the northern route. With the fall of Acre in 1291, and the consequent expulsion of Christians from Syria, Venice lost her hold upon the middle route. But with the pope's leave[2] she succeeded in making a series of advantageous commercial treaties with the new Mameluke sovereigns of Egypt, and the dealings between the Red Sea and the Adriatic soon came to be prodigious. The Venetians gained control of part of the Peloponnesus, with many islands of the Ægean and eastern Mediterranean. During the fourteenth and fifteenth centuries their city was the most splendid and luxurious in all Christendom.

Such a development of wealth in Venice and Genoa implies a large producing and consuming area behind them, able to take and pay for the costly products of India and China. Before the end of the thirteenth century the volume of European trade had swelled to great proportions. How full of historic and literary interest are the very names of the centres and leading routes of this trade as it was established in those days, with its outlook upon the

Centres and routes of mediæval trade.

[1] Yule's *Marco Polo*, vol. i. p. lxxi.

[2] A papal dispensation was necessary before a commercial treaty could be made with Mahometans. See Leibnitz, *Codex Jur. Gent. Diplomat.*, i. 489.

Mediterranean and the distant East! Far up in the North we see Wisby, on the little isle of Gothland in the Baltic, giving its name to new rules of international law; and the merchants of the famous Hansa towns extending their operations as far as Novgorod in one direction, and in another to the Steelyard in London, where the pound of these honest "Easterlings" was adopted as the "sterling" unit of sound money. Fats and tallows, furs and wax from Russia, iron and copper from Sweden, strong hides and unrivalled wools from England, salt cod and herring (much needed on meagre church fast-days) from the North and Baltic seas, appropriately followed by generous casks of beer from Hamburg, were sent southward in exchange for fine cloths and tapestries, the products of the loom in Ghent and Bruges, in Ulm and Augsburg, with delicious vintages of the Rhine, supple chain armour from Milan, Austrian yew-wood for English long-bows, ivory and spices, pearls and silks from Italy and the Orient. Along the routes from Venice and Florence to Antwerp and Rotterdam we see the progress in wealth and refinement, in artistic and literary productiveness. We see the early schools of music and painting in Italy meet with prompt response in Flanders; in the many-gabled streets of Nuremberg we hear the voice of the Meistersinger, and under the low oaken roof of a Canterbury inn we listen to joyous if sometimes naughty tales erst told in pleasant groves outside of fever-stricken Florence.

With this increase of wealth and culture in central Europe there came a considerable extension of

knowledge and a powerful stimulus to curiosity concerning the remote parts of Asia. The conquering career of Jenghis Khan (1206–1227) had shaken the world to its foundations. In the middle of that century, to adopt Colonel Yule's lively expression, "throughout Asia and eastern Europe, scarcely a dog might bark without Mongol leave, from the borders of Poland and the coast of Cilicia to the Amur and the Yellow Sea." About these portentous Mongols, who had thus in a twinkling overwhelmed China and Russia, and destroyed the Caliphate of Bagdad, there was a refreshing touch of open-minded heathenism. They were barbarians willing to learn. From end to end of Asia the barriers were thrown down. It was a time when Alan chiefs from the Volga served as police in Tunking, and Chinese physicians could be consulted at Tabriz. For about a hundred years China was more accessible than at any period before or since, — more even than to-day; and that country now for the first time became really known to a few Europeans. In the northern provinces of China, shortly before the Mongol deluge, there had reigned a dynasty known as the *Khitai*, and hence China was (and still is) commonly spoken of in central Asia as the country of the Khitai. When this name reached European ears it became *Cathay*, the name by which China was best known in Europe during the next four centuries.[1] In 1245, Friar John of Plano Carpini, a friend and disciple of St. Francis, was

Effects of the Mongol conquests.

Cathay.

[1] Yule's *Cathay*, vol. i. p. cxvi.; *Marco Polo*, vol. i. p. xlii.

sent by Pope Innocent IV. on a missionary errand to the Great Khan, and visited him in his camp at Karakorum in the very depths of Mongolia. In 1253 the king of France, St. Louis, sent another Franciscan monk, Willem de Rubruquis, to Karakorum, on a mission of which the purpose is now not clearly understood. Both these Franciscans were men of shrewd and cultivated minds, especially Rubruquis, whose narrative, "in its rich detail, its vivid pictures, its acuteness of observation and strong good sense . . . has few superiors in the whole library of travel."[1] Neither Rubruquis nor Friar John visited China, but they fell in with Chinese folk at Karakorum, and obtained information concerning the geography of eastern Asia far more definite than had ever before been possessed by Europeans. They both describe Cathay as bordering upon an eastern ocean, and this piece of information constituted the first important leap of geographical knowledge to the eastward since the days of Ptolemy, who supposed that beyond the "Seres and Sinæ" lay an unknown land of vast extent, "full of reedy and impenetrable swamps."[2] The

Carpini and Rubruquis.

First knowledge of an eastern ocean beyond Cathay.

[1] Yule's *Marco Polo*, vol. i. p. cxxx.; cf. Humboldt, *Examen critique*, tom. i. p. 71. The complete original texts of the reports of both monks, with learned notes, may be found in the *Recueil de Voyages et de Mémoires, publié par la Société de Geographie*, Paris, 1839, tom. iv., viz.: *Johannis de Plano Carpini Historia Mongolorum quos nos Tartaros appellamus*, ed. M. d'Avezac; *Itinerarium Willelmi de Rubruk*, ed. F. Michel et T. Wright.

[2] Yule's *Cathay*, vol. i. p. xxxix.; Ptolemy, i. 17. Cf. Bunbury's *History of Ancient Geography*, London, 1883, vol. ii. p. 606.

information gathered by Rubruquis and Friar John indicated that there was an end to the continent of Asia; that, not as a matter of vague speculation, but of positive knowledge, Asia was bounded on the east, just as Europe was bounded on the west, by an ocean.

Here we arrive at a notable landmark in the history of the Discovery of America. Here from the camp of bustling heathen at Karakorum there is brought to Europe the first announcement of a geographical fact from which the poetic mind of Christopher Columbus will hereafter reap a wonderful harvest. This is one among many instances of the way in which, throughout all departments of human thought and action, the glorious thirteenth century was beginning to give shape to the problems of which the happy solution has since made the modern world so different from the ancient.[1] Since there is an ocean east of Cathay and an ocean west of Spain, how natural the inference — and albeit quite wrong, how amazingly fruitful — that these oceans are one and the same, so that by sailing westward from Spain one might go straight to Cathay! The data for such an inference were now all at hand, but it does not appear that any one as yet reasoned from the data to the conclusion, although we find Roger Bacon, in 1267, citing the opinions of Aristotle and other ancient

The data were thus prepared for Columbus;

but as yet nobody reasoned from these data to a practical conclusion.

[1] See my *Beginnings of New England*, chap. i. How richly suggestive to an American is the contemporaneity of Rubruquis and Earl Simon of Leicester!

writers to the effect that the distance by sea from the western shores of Spain to the eastern shores of Asia cannot be so very great.[1] In those days it took a long time for such ideas to get from the heads of philosophers into the heads of men of action; and in the thirteenth century, when Cathay was more accessible by land than at any time before or since, there was no practical necessity felt for a water route thither. Europe still turned her back upon the Atlantic and gazed more intently than ever upon Asia. Stronger and more general grew the interest in Cathay.

The Polo brothers.

In the middle of the thirteenth century, some members of the Polo family, one of the aristocratic families of Venice, had a commercial house at Constantinople. Thence, in 1260, the brothers Nicolò and Maffeo Polo started on a trading journey to the Crimea, whence one opportunity after another for making money and gratifying their curiosity with new sights led them northward and eastward to the Volga, thence into Bokhara, and so on until they reached the court of the Great Khan, in one of the northwestern provinces of Cathay. The reigning sovereign was the famous Kublai Khan, grandson of the all-conquering Jenghis. Kublai was an able and benevolent despot, earnest in the wish to improve the condition of his Mongol kinsmen. He had never before met European gentlemen, and was charmed with the cultivated and polished Venetians. He seemed quite ready to enlist the Roman Church in aid of his civilizing schemes, and entrusted the Polos with

[1] Roger Bacon, *Opus Majus*, ed. Jebb, London, 1733, p. 183.

a message to the Pope, asking him for a hundred missionary teachers. The brothers reached Venice in 1269, and found that Pope Clement IV. was dead and there was an interregnum. After two years Gregory X. was elected and received the Khan's message, but could furnish only a couple of Dominican friars, and these men were seized with the dread not uncommonly felt for "Tartareans," and at the last moment refused to go. Nicolò and his brother then set out in the autumn of 1271 to return to China, taking with them Nicolò's son Marco, a lad of seventeen years. From Acre they went by way of Bagdad to Hormuz, at the mouth of the Persian gulf, apparently with the intention of proceeding thence by sea, but for some reason changed their course, and travelled through Kerman, Khorassan, and Balkh, to Kashgar, and thence by way of Yarkand and Khotan, and across the desert of Gobi into northwestern China, where they arrived in the summer of 1275, and found the Khan at Kaipingfu, not far from the northern end of the Great Wall.

Kublai Khan's message to the Pope.

It has been said that the failure of Kublai's mission to the Pope led him to apply to the Grand Lama, at Thibet, who responded more efficiently and successfully than Gregory X., so that Buddhism seized the chance which Catholicism failed to grasp. The Venetians, however, lost nothing in the good Khan's esteem. Young Marco began to make himself proficient in speaking and writing several Asiatic languages, and was presently taken into the Khan's

Marco Polo and his travels in Asia.

service. His name is mentioned in the Chinese Annals of 1277 as a newly-appointed commissioner of the privy council.[1] He remained in Kublai's service until 1292, while his father and uncle were gathering wealth in various ways. Marco made many official journeys up and down the Khan's vast dominions, not only in civilized China, but in regions of the heart of Asia seldom visited by Europeans to this day, — "a vast ethnological garden," says Colonel Yule, "of tribes of various race and in every stage of uncivilization." In 1292 a royal bride for the Khan of Persia was to be sent all the way from Peking to Tabriz, and as war that year made some parts of the overland route very unsafe, it was decided to send her by sea. The three Polos had for some time been looking for an opportunity to return to Venice, but Kublai was unwilling to have them go. Now, however, as every Venetian of that day was deemed to be from his very cradle a seasoned sea-dog, and as the kindly old Mongol sovereign had an inveterate land-lubber's misgivings about ocean voyages, he consented to part with his dear friends, so that he might entrust the precious princess to their care. They sailed from the port of Zaiton (Chinchow) early in 1292, and after long delays on the coasts of Sumatra and Hindustan, in order to avoid unfavourable monsoons, they reached the Persian gulf in 1294. They found that the royal bridegroom, somewhat advanced in years, had died before they started from China;

First recorded voyage of Europeans around the Indo-Chinese peninsula, 1292-94.

[1] Pauthier's *Marco Polo*, p. 361; Yule's *Marco Polo*, p. li.

so the young princess became the bride of his son. After tarrying awhile in Tabriz, the Polos returned, by way of Trebizond and the Bosphorus, to Venice, arriving in 1295. When they got there, says Ramusio, after their absence of four and twenty years, "the same fate befel them as befel Ulysses, who, when he returned to his native Ithaca, was recognized by nobody." Their kinsfolk had long since given them up for dead; and when the three wayworn travellers arrived at the door of their own palace, the middle-aged men now wrinkled graybeards, the stripling now a portly man, all three attired in rather shabby clothes of Tartar cut, and "with a certain indescribable smack of the Tartar about them, both in air and accent," some words of explanation were needed to prove their identity. After a few days they invited a party of old friends to dinner, and bringing forth three shabby coats, ripped open the seams and welts, and began pulling out and tumbling upon the table such treasures of diamonds and emeralds, rubies and sapphires, as could never have been imagined, "which had all been stitched up in those dresses in so artful a fashion that nobody could have suspected the fact." In such wise had they brought home from Cathay their ample earnings; and when it became known about Venice that the three long-lost citizens had come back, "straightway the whole city, gentle and simple, flocked to the house to embrace them, and to make much of them, with every conceivable demonstration of affection and respect."[1]

Return of the Polos to Venice.

[1] Ramusio, *apud* Yule's *Marco Polo*, vol. i. p. xxxvii.

Three years afterward, in 1298, Marco commanded a galley in the great naval battle with the Genoese near Curzola. The Venetians were totally defeated, and Marco was one of the 7,000 prisoners taken to Genoa, where he was kept in durance for about a year. One of his companions in captivity was a certain Rusticiano, of Pisa, who was glad to listen to his descriptions of Asia, and to act as his amanuensis. French was then, at the close of the Crusades, a language as generally understood throughout Europe as later, in the age of Louis XIV.; and Marco's narrative was duly taken down by the worthy Rusticiano in rather lame and shaky French. In the summer of 1299 Marco was set free and returned to Venice, where he seems to have led a quiet life until his death in 1324.

Marco Polo's book written in prison at Genoa, 1299.

"The Book of Ser Marco Polo concerning the Kingdoms and Marvels of the East" is one of the most famous and important books of the Middle Ages. It contributed more new facts toward a knowledge of the earth's surface than any book that had ever been written before. Its author was "the first traveller to trace a route across the whole longitude of Asia;" the first to describe China in its vastness, with its immense cities, its manufactures and wealth, and to tell, whether from personal experience or direct hearsay, of Thibet and Burmah, of Siam and Cochin China, of the Indian archipelago, with its islands of spices, of Java and Sumatra, and of the savages of Andaman. He

Its great contributions to geographical knowledge.

knew of Japan and the woful defeat of the Mongols there, when they tried to invade the island kingdom in 1281. He gave a description of Hindustan far more complete and characteristic than had ever before been published. From Arab sailors, accustomed to the Indian ocean, he learned something about Zanzibar and Madagascar and the semi-Christian kingdom of Abyssinia. To the northward from Persia he described the country of the Golden Horde, whose khans were then holding Russia in subjection; and he had gathered some accurate information concerning Siberia as far as the country of the Samoyeds, with their dog-sledges and polar bears.[1]

Here was altogether too much geographical knowledge for European ignorance in those days to digest. While Marco's book attracted much attention, its influence upon the progress of geography was slighter than it would have been if addressed to a more enlightened public. Many of its sober statements of fact were received with incredulity. Many of the places described were indistinguishable, in European imagination, from the general multitude of fictitious countries mentioned in fairy-tales or in romances of chivalry. Perhaps no part of Marco's story was so likely to interest his readers as his references to Prester John. In the course of the twelfth century the notion had somehow gained possession of the European mind that somewhere out in the dim vastness of the Orient there dwelt a mighty Christian potentate, known as John the

Prester John.

[1] Yule's *Marco Polo*, vol. i. p. cxxxi.

Presbyter or "Prester."[1] At different times he was identified with various known Asiatic sovereigns. Marco Polo identified him with one Togrul Wang, who was overcome and slain by the mighty Jenghis; but he would not stay dead, any more than the grewsome warlock in Russian nursery lore. The notion of Prester John and his wealthy kingdom could no more be expelled from the European mind in the fourteenth and fifteenth centuries than the kindred notion of El Dorado in the sixteenth. The position of this kingdom was shifted about here and there, as far as from Chinese Tartary to Abyssinia and back again, but somewhere or other in people's vague mental picture of the East it was sure to occur. Other remote regions in Asia were peopled with elves and griffins and "one-eyed Arimaspians,"[2] and we may be sure that to Marco's

The "Arimaspians."

[1] "But for to speake of riches and of stones,
And men and horse, I trow the large wones
Of Prestir John, ne all his tresorie,
Might not unneth have boght the tenth partie."
Chaucer, *The Flower and the Leaf*, 200.

The fabulous kingdom of Prester John is ably treated in Yule's *Cathay*, vol. i. pp. 174–182; *Marco Polo*, vol. i. p. 204–216. Colonel Yule suspects that its prototype may have been the semi-Christian kingdom of Abyssinia. This is very likely. As for its range, shifted hither and thither as it was, all the way from the upper Nile to the Thian-Shan mountains, we can easily understand this if we remember how an ignorant mind conceives all points distant from its own position as near to one another; i. e. if you are about to start from New York for Arizona, your housemaid will perhaps ask you to deliver a message to her brother in Manitoba. Nowhere more than in the history of geography do we need to keep before us, at every step, the limitations of the untutored mind and its feebleness in grasping the space-relations of remote regions.

[2] These Arimaspians afford an interesting example of the un-

readers these beings were quite as real as the polished citizens of Cambaluc (Peking) or the cannibals of the Andaman islands. From such a chaos of ideas sound geographical knowledge must needs be a slow evolution, and Marco Polo's acquisitions were altogether too far in advance of his age to be readily assimilated.

Nevertheless, in the Catalan map, made in 1375, and now to be seen in the National Library at Paris, there is a thorough-going and not unsuccessful attempt to embody the results of Polo's travels. In the interval of three quarters of a century since the publication of Marco's narrative, several adventurous travellers had found their way to Cathay. There was Friar

Other visits to China.

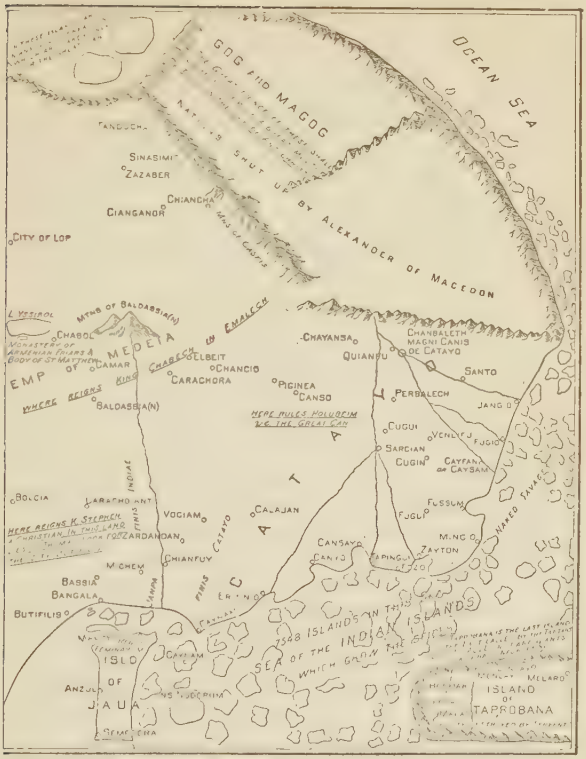
critical statements of travellers at an early time, as well as of their tenacious vitality. The first mention of these mythical people seems to have been made by Greek travellers in Scythia as early as the seventh century before Christ; and they furnished Aristeas of Proconnesus, somewhat later, with the theme of his poem "Arimaspeia," which has perished, all except six verses quoted by Longinus. See Mure's *Literature of Antient Greece*, vol. iv. p. 68. Thence the notion of the Arimaspians seems to have passed to Herodotus (iii. 116; iv. 27) and to Æschylus: —

> ὀξυστόμους γὰρ Ζηνὸς ἀκραγεῖς κύνας
> γρῦπας φύλαξει, τόν τε μουνῶπα στρατὸν
> Ἀριμασπὸν ἱπποβάμον', οἱ χρυσόῤῥυτον
> οἰκοῦσιν ἀμφὶ νᾶμα Πλούτωνος πόρου·
> τούτοις σὺ μὴ πέλαζε.
>
> *Prometheus*, 802.

Thence it passed on to Pausanias, i. 24; Pomponius Mela, ii. 1; Pliny, *Hist. Nat.*, vii. 2; Lucan, *Pharsalia*, iii. 280; and so on to Milton: —

> "As when a gryphon through the wilderness,
> With winged course o'er hill or moory dale,
> Pursues the Arimaspian who by stealth
> Had from his wakeful custody purloined
> The guarded gold."
>
> *Paradise Lost*, ii. 944.

Two sheets of



the Catalan Map, 1375.

Odoric, of Pordenone, who, during the years 1316–30 visited Hindustan, Sumatra, Java, Cochin China, the Chinese Empire, and Thibet.[1] It was from this worthy monk that the arrant old impostor, "Sir John Mandeville," stole his descriptions of India and Cathay, seasoning them with yarns from Pliny and Ktesias, and grotesque conceits of his own.[2] Several other missionary friars visited China between 1302 and 1330, and about ten years after the latter date the Florentine merchant, Francesco Pegolotti, wrote a very useful handbook for commercial travellers on the over-

[1] Odoric mentions Juggernaut processions and the burning of widows; in Sumatra he observed cannibalism and community of wives; he found the kingdom of Prester John in Chinese Tartary; "but as regards him," says wise Odoric, "not one hundredth part is true of what is told of him as if it were undeniable." Yule's *Cathay*, vol. i. pp. 79, 85, 146.

[2] Colonel Yule gives a list of fourteen important passages taken bodily from Odoric by Mandeville. *Op. cit.* i. 28. It is very doubtful if that famous book, "Sir John Mandeville's Travels," was written by a Mandeville, or by a knight, or even by an Englishman. It seems to have been originally written in French by Jean de Bourgogne, a physician who lived for some years at Liège, and died there somewhere about 1370. He may possibly have been an Englishman named John Burgoyne, who was obliged some years before that date to flee his country for homicide or for some political offence. He had travelled as far as Egypt and Palestine, but no farther. His book is almost entirely cribbed from others, among which may be mentioned the works of Jacques de Vitry, Plano Carpini, Hayton the Armenian, Boldensele's Itinerary, Albert of Aix's chronicle of the first crusade, Brunetto Latini's *Trésor*, Petrus Comestor's *Historia scholastica*, the *Speculum* of Vincent de Beauvais, etc., etc. It is one of the most wholesale and successful instances of plagiarism and imposture on record. See *The Buke of John Mandevill, from the unique copy* (*Egerton MS.* 1982) *in the British Museum. Edited by G. F. Warner.* Westminster, 1889. (Roxburghe Club.)

land route to that country.[1] Between 1338 and 1353 Giovanni Marignolli spent some years at Peking, as papal legate from Benedict XI. to the Great Khan, and also travelled in Ceylon and Hindustan.[2] That seems to have been the last of these journeys to the Far East. In 1368, the people of China rose against the Mongol dynasty and overthrew it. The first emperor of the native Ming dynasty was placed upon the throne, and the Chinese retorted upon their late conquerors by overrunning vast Mongolia and making it Chinese Tartary. The barriers thrown down by the liberal policy of the Mongol sovereigns were now put up again, and no more foreigners were allowed to set foot upon the sacred soil of the Flowery Kingdom.

Overthrow of the Mongol dynasty, and shutting up of China.

Thus, for just a century, — from Carpini and Rubruquis to Marignolli, — while China was open to strangers as never before or since, a few Europeans had availed themselves of the opportunity in such wise as to mark the beginning of a new era

[1] One piece of Pegolotti's advice is still useful for travellers in the nineteenth century who visit benighted heathen countries afflicted with robber tariffs: "And don't forget that if you treat the custom-house officers with respect, and make them something of a present in goods or money, they will behave with great civility and always be ready to appraise your wares below their real value." *Op. cit.* ii. 307.

[2] The works of all the writers mentioned in this paragraph, or copious extracts from them, may be found in Yule's *Cathay*, which comprises also the book of the celebrated Ibn Batuta, of Tangier, whose travels, between 1325 and 1355, covered pretty much the whole of Asia except Siberia, besides a journey across Sahara to the river Niger. His book does not seem to have attracted attention in Europe until early in the present century.

in the history of geographical knowledge. Though the discoveries of Marco Polo were as yet but imperfectly appreciated, one point, and that the most significant of all, was thoroughly established. It was shown that the continent of Asia did not extend indefinitely eastward, nor was it bounded and barricaded on that side, as Ptolemy had imagined, by vast impenetrable swamps. On the contrary, its eastern shores were perfectly accessible through an open sea, and half a dozen Europeans in Chinese ships had now actually made the voyage between the coast of China and the Persian gulf. Moreover, some hearsay knowledge — enough to provoke curiosity and greed — had been gained of the existence of numerous islands in that far-off eastern ocean, rich in the spices which from time immemorial had formed such an important element in Mediterranean commerce. News, also, had been brought to Europe of the wonderful island kingdom of Japan (Cipango or Zipangu) lying out in that ocean some hundreds of miles beyond the coast of Cathay. These were rich countries, abounding in objects of lucrative traffic. Under the liberal Mongol rule the Oriental trade had increased enough for Europe to feel in many ways its beneficial effects. Now this trade began to be suddenly and severely checked, and while access to the interior of Asia was cut off, European merchants might begin to reflect upon the value of what they were losing, and to consider if there were any feasible method of recovering it.

First rumours of the Moluccа islands and Japan.

It was not merely the shutting up of China by

the first Ming emperor, in 1368, that checked the intercourse between Europe and Asia. A still more baleful obstacle to all such intercourse had lately come upon the scene. In Asia Minor the beastly Turk, whose career had been for two centuries arrested by the Crusades, now reared his head again. The Seljukian had been only scotched, not killed; and now he sprang to life as the Ottoman, with sharper fangs than before. In 1365 the Turks established themselves in the Balkan peninsula, with Adrianople as their capital, and began tightening their coils about the doomed city of Constantine. Each point that they gained meant the strangling of just so much Oriental trade; for, as we have seen, the alliance of Constantinople with Genoa since 1261 had secured to the latter city, and to western Europe, the advantages of the overland routes from Asia, whether through the Volga country or across Armenia. When at length, in 1453, the Turks took Constantinople, the splendid commercial career of Genoa was cut with the shears of Atropos. At the same time, as their power was rapidly extending over Syria and down toward Egypt, threatening the overthrow of the liberal Mameluke dynasty there, the commercial prosperity of Venice also was seriously imperilled. Moreover, as Turkish corsairs began to swarm in the eastern waters of the Mediterranean, the voyage became more and more unsafe for Christian vessels. It was thus, while the volume of trade with Asia was, in the natural course of things, swelling year by year,

The accustomed routes of Oriental trade cut off by the Ottoman Turks.

that its accustomed routes were being ruthlessly cut off. It was fast becoming necessary to consider whether there might not be other practicable routes to "the Indies" than those which had from time immemorial been followed. Could there be such a thing as an "outside route" to that land of promise? A more startling question has seldom been propounded; for it involved a radical departure from the grooves in which the human mind had been running ever since the days of Solomon. Two generations of men lived and died while this question was taking shape, and all that time Cathay and India and the islands of Spices were objects of increasing desire, clothed by eager fancy with all manner of charms and riches. The more effectually the eastern Mediterranean was closed, the stronger grew the impulse to venture upon unknown paths in order to realize the vague but glorious hopes that began to cluster about these remote countries. Such an era of romantic enterprise as was thus ushered in, the world has never seen before or since. It was equally remarkable as an era of discipline in scientific thinking In the maritime ventures of unparalleled boldness now to be described, the human mind was groping toward the era of enormous extensions of knowledge in space and time represented by the names of Newton and Darwin. It was learning the right way of putting its trust in the Unseen.

Necessity for finding an "outside route to the Indies."

CHAPTER IV.

THE SEARCH FOR THE INDIES.

EASTWARD OR PORTUGUESE ROUTE.

As it dawned upon men's minds that to find some oceanic route from Europe to the remote shores of Asia was eminently desirable, the first attempt would naturally be to see what could be done by sailing down the western coast of Africa, and ascertaining whether that continent could be circumnavigated. It was also quite in the natural order of things that this first attempt should be made by the Portuguese.

Question as to whether Asia could be reached by sailing around Africa.

In the general history of the Middle Ages the Spanish peninsula had been to some extent cut off from the main currents of thought and feeling which actuated the rest of Europe. Its people had never joined the other Christian nations in the Crusades, for the good reason that they always had quite enough to occupy them in their own domestic struggle with the Moors. From the throes of this prolonged warfare Portugal emerged somewhat sooner than the Spanish kingdoms, and thus had somewhat earlier a surplus of energy released for work of another sort. It was not strange that the Portuguese should be the first people since the old Northmen to engage in dis-

tant maritime adventure upon a grand scale. Nor was it strange that Portuguese seamanship should at first have thriven upon naval warfare with Mussulmans. It was in attempting to suppress the intolerable nuisance of Moorish piracy that Portuguese ships became accustomed to sail a little way down the west coast of Africa; and such voyages, begun for military purposes, were kept up in the interests of commerce, and presently served as a mighty stimulus to geographical curiosity. We have now to consider at some length how grave was the problem that came up for immediate solution.

With regard to the circumnavigability of Africa two opposite opinions were maintained by the ancient Greek and Latin writers whose authority the men of the Middle Ages were wont to quote as decisive of every vexed question. The old Homeric notion of an ocean encompassing the terrestrial world, although mentioned with doubt by Herodotus,[1] continued to survive after the globular form of the earth had come to be generally maintained by ancient geographers. The greatest of these geographers, Eratosthenes, correctly assumed that the Indian ocean was continuous with the Atlantic,[2] and that Africa could be circumnavigated, just as he incor-

Views of Eratosthenes, B. C. 276–196.

[1] Τὸν δὲ Ὠκεανὸν λόγῳ μὲν λέγουσι ἀπ' ἡλίου ἀνατολέων ἀρξάμενον γῆν περὶ πᾶσαν ῥέειν, ἔργῳ δέ οὐκ ἀποδεικνῦσι. Herodotus, iv. 8.

[2] Καὶ γὰρ κατ' αὐτὸν Ἐρατοσθένη τὴν ἐκτὸς θάλατταν ἅπασαν σύρρουν εἶναι, ὥστε καὶ τὴν Ἑσπέριον καὶ τὴν Ἐρυθρὰν θάλατταν μίαν εἶναι. Strabo, i. 3, § 13.

rectly assumed that the Caspian sea was a huge gulf communicating with a northern ocean, by which it would be possible to sail around the continent of Asia as he imagined it.[1] A similar opinion as to Africa was held by Posidonius and by Strabo.[2] It was called in question, however, by Polybius,[3] and was flatly denied by the great astronomer Hipparchus, who thought that certain observations on the tides, reported by Seleucus of Babylon, proved that there could be no connection between the Atlantic and Indian oceans.[4] Claudius Ptolemy, writing in the second century after Christ, followed the opinion of Hipparchus, and carried to an extreme the reaction against Eratosthenes. By Ptolemy's time the Caspian had been proved to be an inland sea, and it was evident that Asia extended much farther to the north and east than had once been supposed. This seems to have discredited in his mind the whole conception of outside oceans, and he not only gave an indefinite northward and eastward extension to Asia and an indefinite southern extension to Africa, but brought these two continents together far to the southeast, thus making the Indian ocean a landlocked sea.[5]

Opposing theory of Ptolemy, cir. A. D. 150.

These views of Hipparchus and Ptolemy took

[1] Bunbury, *History of Ancient Geography*, vol. i. p. 644.

[2] Strabo, ii. 3, § 4; xvii. 3, § 1.

[3] Καθάπερ δὲ καὶ τῆς Ἀσίας καὶ τῆς Λιβύης, καθὸ συνάπτουσιν ἀλλήλαις περὶ τὴν Αἰθιοπίαν, οὐδεὶς ἔχει λέγειν ἀτρεκῶς ἕως τῶν καθ' ἡμᾶς καιρῶν, πότερον ἤπειρός ἐστι κατὰ τὸ συνεχὲς τὰ πρὸς τὴν μεσημβρίαν, ἢ θαλάττῃ περιέχεται. Polybius, iii. 38.

[4] Bunbury, *op. cit.* vol. ii. p. 15.

[5] See the map of Ptolemy's world, above, p. 264.

no heed of the story told to Herodotus of the circumnavigation of Africa by a Phœnician squadron at some time during the reign of Necho in Egypt (610–595 B. C.).[1] The Phœnician ships were said to have sailed from the Red Sea and to have returned through the Mediterranean in the third year after starting. In each of the two autumn seasons they stopped and sowed grain and waited for it to ripen, which in southern Africa would require ten or twelve weeks.[2] On their return to Egypt they declared ("I for my part do not believe them," says Herodotus, "but perhaps others may") that in thus sailing from east to west around Africa they had the sun upon their right hand. About this alleged voyage there has been a good deal of controversy.[3] No other expedition in any wise com-

Story of the Phœnician voyage, in the time of Necho.

[1] Ptolemy expressly declares that the equatorial regions had never been visited by people from the northern hemisphere: *Τίνες δέ εἰσιν αἱ οἰκήσεις οὐκ ἂν ἔχοιμεν πεπεισμένως εἰπεῖν. Ἀτρίπτοι γάρ εἰσι μέχρι τοῦ δεῦρο τοῖς ἀπὸ τῆς καθ' ἡμᾶς οἰκουμένης, καὶ εἰκασίαν μᾶλλον ἔν τις ἢ ἱστορίαν ἡγήσαιτο τὰ λεγόμενα περὶ αὐτῶν.* *Syntaxis*, ii. 6.

[2] Rawlinson's *Herodotus*, vol. iii. p. 29, note 8.

[3] The story is discredited by Mannert, *Geographie der Griechen und Römer*, bd. i. pp. 19–26; Gossellin, *Recherches sur la géographie des Anciens*, tom. i. p. 149; Lewis, *Astronomy of the Ancients*, pp. 508–515; Vincent, *Commerce and Navigation of the Ancients in the Indian Ocean*, vol. i. pp. 303–311, vol. ii. pp. 13–15; Leake, *Disputed Questions of Ancient Geography*, pp. 1–8. It is defended by Heeren, *Ideen über die Politik, den Verkehr*, etc., 3e aufl., Göttingen, 1815, bd. i. abth. ii pp. 87–93; Rennell, *Geography of Herodotus*, pp. 672–714; Grote, *History of Greece*, vol. iii. pp. 377–385. The case is ably presented in Bunbury's *History of Ancient Geography*, vol. i. pp. 289–296, where it is concluded that the story "cannot be disproved or pronounced to be absolutely impossible; but the difficulties and improbabilities attend-

parable to it for length and difficulty can be cited from ancient history, and a critical scholar is inclined to look with suspicion upon all such accounts of unique and isolated events. As we have not the details of the story, it is impossible to give it a satisfactory critical examination. The circumstance most likely to convince us of its truth is precisely that which dear old Herodotus deemed incredible. The position of the sun, to the north of the mariners, is something that could hardly have been imagined by people familiar only with the northern hemisphere. It is therefore almost certain that Necho's expedition sailed beyond the equator.[1] But that is as far as inference can properly carry us; for our experience of the uncritical temper of ancient narrators is enough to suggest that such

ing it are so great that they cannot reasonably be set aside without better evidence than the mere statement of Herodotus, upon the authority of unknown informants." Mr. Bunbury (vol. i. p. 317) says that he has reasons for believing that Mr. Grote afterwards changed his opinion and came to agree with Sir George Lewis.

[1] In reading the learned works of Sir George Cornewall Lewis, one is often reminded of what Sainte-Beuve somewhere says of the great scholar Letronne, when he had spent the hour of his lecture in demolishing some pretty or popular belief: "Il se frotta les mains et s'en alla bien content." When it came to ancient history, Sir George was undeniably fond of "the everlasting No." In the present case his skepticism seems on the whole well-judged, but some of his arguments savour of undue haste toward a negative conclusion. He thus strangely forgets that what we call autumn is springtime in the southern hemisphere (*Astronomy of the Ancients*, p. 511). His argument that the time alleged was insufficient for the voyage is fully met by Major Rennell, who has shown that the time was amply sufficient, and that the direction of winds and ocean currents would make the voyage around southern Africa from east to west much easier than from west to east.

an achievement might easily be magnified by rumour into the story told more than a century after the event, to Herodotus. The data are too slight to justify us in any dogmatic opinion. One thing, however, is clear. Even if the circumnavigation was effected, — which, on the whole, seems improbable, — it remained quite barren of results. It produced no abiding impression upon men's minds[1] and added nothing to geographical knowledge. The veil of mystery was not lifted from southern Africa. The story was doubted by Strabo and Posidonius, and passed unheeded, as we have seen, by Hipparchus and Ptolemy.

Of Phœnician and other voyages along the Atlantic coast of Africa we have much more detailed and trustworthy information. As early as the twelfth century before Christ traders from Tyre had founded Cadiz (Gades),[2] and at a later date the same hardy people seem to have made the beginnings of Lisbon (Olisipo). From such advanced stations Tyrian and Carthaginian ships sometimes found their way northward as far as Cornwall, and in the opposite direction fishing voyages were made along the African coast. The most remarkable undertaking in this quarter was the famous voyage of the Carthaginian commander Hanno, whose own brief but interesting account

Voyage of Hanno.

[1] "No trace of it could be found in the Alexandrian library, either by Eratosthenes in the third, or by Marinus of Tyre in the second, century before Christ, although both of them were diligent examiners of ancient records." Major, *Prince Henry the Navigator*, p. 90.

[2] Rawlinson's *History of Phœnicia*, pp. 105, 418; Pseudo-Aristotle, *Mirab. Auscult.*, 146; Velleius Paterculus, i. 2, § 6.

of it has been preserved.[1] This expedition consisted of sixty penteconters (fifty-oared ships), and its chief purpose was colonization. Upon the Mauritanian coast seven small trading stations were founded, one of which — Kerne, at the mouth of the Rio d' Ouro[2] — existed for a long time. From this point Hanno made two voyages of exploration, the second of which carried him as far as Sierra Leone and the neighbouring Sherboro island, where he found "wild men and women covered with hair," called by the interpreters "gorillas."[3] At that point the ships turned back, apparently for want of provisions.

No other expedition in ancient times is known to have proceeded so far south as Sierra Leone. Two other voyages upon this Atlantic coast are mentioned, but without definite details. The one was that of Sataspes (about 470 B. C.), narrated

[1] Hanno, *Periplus*, in Müller, *Geographi Græci Minores*, tom. i. pp. 1–14. Of two or three commanders named Hanno it is uncertain which was the one who led this expedition, and thus its date has been variously assigned from 570 to 470 B. C.

[2] For the determination of these localities see Bunbury, *op. cit.* vol. i. pp. 318–335. There is an interesting Spanish description of Hanno's expedition in Mariana, *Historia de España*, Madrid, 1783, tom. i. pp. 89–93.

[3] The sailors pursued them, but did not capture any of the males, who scrambled up the cliffs out of their reach. They captured three females, who bit and scratched so fiercely that it was useless to try to take them away. So they killed them and took their skins home to Carthage. *Periplus*, xviii. According to Pliny (*Hist. Nat.*, vi. 36) these skins were hung up as a votive offering in the temple of Juno (i. e. Astarte or Ashtoreth: see Apuleius, *Metamorph.*, xi. 257; Gesenius, *Monumenta Phœnic.*, p. 168), where they might have been seen at any time before the Romans destroyed the city.

by Herodotus, who merely tells us that a coast was reached where undersized men, clad in palm-leaf garments, fled to the hills at sight of the strange visitors.[1] The other was that of Eudoxus (about 85 B. C.), related by Posidonius, the friend and teacher of Cicero. The story is that this Eudoxus, in a voyage upon the east coast of Africa, having a philological turn of mind, wrote down the words of some of the natives whom he met here and there along the shore. He also picked up a ship's prow in the form of a horse's head, and upon his return to Alexandria some merchants professed to recognize it as belonging to a ship of Cadiz. Eudoxus thereupon concluded that Africa was circumnavigable, and presently sailed through the Mediterranean and out upon the Atlantic. Somewhere upon the coast of Mauritania he found natives who used some words of similar sound to those which he had written down when visiting the eastern coast, whence he concluded that they were people of the same race. At this point he turned back, and the sequel of the story was unknown to Posidonius.[2]

Voyages of Sataspes and Eudoxus.

It is worthy of note that both Pliny and Pomponius Mela, quoting Cornelius Nepos as their authority, speak of Eudoxus as having circumnavigated Africa from the Red Sea to Cadiz; and Pliny, moreover, tells us that Hanno sailed around that continent as far as Arabia,[3] — a statement which is

[1] Herodotus, iv. 43.

[2] The story is preserved by Strabo, ii. 3, §§ 4, 5, who rejects it with a vehemence for which no adequate reason is assigned.

[3] Pliny, *Hist. Nat.*, ii. 67: Mela, *De Situ Orbis*, iii. 9.

clearly false. These examples show how stories grow when carelessly and uncritically repeated, and they strongly tend to confirm the doubt with which one is inclined to regard the tale of Necho's sailors above mentioned. In truth, the island of Gorillas, discovered by Hanno, was doubtless the most southerly point on that coast reached by navigators in ancient times. Of the islands in the western ocean the Carthaginians certainly knew the Canaries (where they have left undoubted inscriptions), probably also the Madeiras, and possibly the Cape Verde group.[1]

Wild exaggerations.

The extent of the knowledge which the ancients thus had of western Africa is well illustrated in the map representing the geographical theories of Pomponius Mela, whose book was written about A. D. 50. Of the eastern coast and the interior

[1] After the civil war of Sertorius (B. C. 80–72), the Romans became acquainted with the Canaries, which, because of their luxuriant vegetation and soft climate, were identified with the Elysium described by Homer, and were commonly known as the Fortunate islands. "Contra Fortunatæ Insulæ abundant sua sponte genitis, et subinde aliis super aliis innascentibus nihil sollicitos alunt, beatius quam aliæ urbes exultæ." Mela, iii. 10.

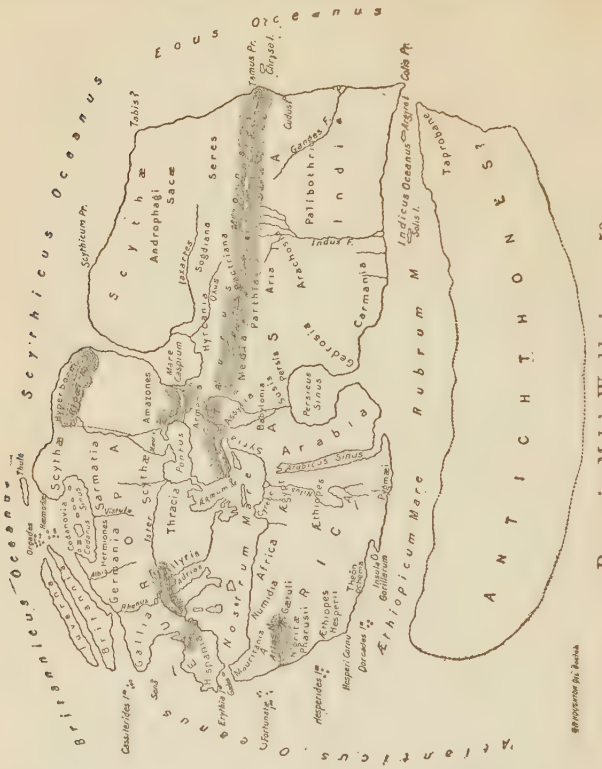
> Ἀλλά σ' ἐς Ἠλύσιον πεδίον καὶ πείρατα γαίης
> ἀθάνατοι πέμψουσιν, ὅθι ξανθὸς Ῥαδάμανθυς,
> τῇπερ ῥηϊστη βιοτὴ πέλει ἀνθρώποισιν·
> οὐ νιφετὸς, οὔτ' ἄρ χειμὼν πολὺς οὔτε ποτ' ὄμβρος,
> ἀλλ' αἰεὶ Ζεφύροιο λιγὺ πνείοντας ἀήτας
> Ὠκεανὸς ἀνίησιν ἀναψύχειν ἀνθρώπους.
>
> *Odyssey*, iv. 563.

Since Horace's time (*Epod.* vi. 41–66) the Canary islands have been a favourite theme for poets. It was here that Tasso placed the loves of Rinaldo and Armida, in the delicious garden where

> Vezzosi augelli infra le verde fronde
> Temprano a prova lascivette note.
> Mormora l' aura, e fa le foglie e l' onde
> Garrir, che variamente ella percote.
>
> *Gerusalemme Liberata*, xvi. 12.

Views of Pomponius Mela, cir. A. D. 50.

Mela knew less than Ptolemy a century later, but of the Atlantic coast he knew more than Ptolemy. The fact that the former geographer was a native of Spain and the latter a native of Egypt no doubt had some-



thing to do with this. Mela had profited by the Carthaginian discoveries. His general conception of the earth was substantially that of Eratosthenes. It was what has been styled the "oceanic"

theory, in contrast with the "continental" theory of Ptolemy. In the unvisited regions on all sides of the known world Eratosthenes imagined vast oceans, Ptolemy imagined vast deserts or impenetrable swamps. The former doctrine was of course much more favourable to maritime enterprise than the latter. The works of Ptolemy exercised over the mediæval mind an almost despotic sway, which, in spite of their many merits, was in some respects a hindrance to progress; so that, inasmuch as the splendid work of Strabo, the most eminent follower of Eratosthenes, was unknown to mediæval Europe until about 1450, it was fortunate that the Latin treatise of Mela was generally read and highly esteemed. People in those days were such uncritical readers that very likely the antagonism between Ptolemy and Mela may have failed to excite comment,[1] especially in view of the lack of suitable maps such as emphasize that antagonism to our modern minds. But in the fifteenth century, when men were getting their first inklings of critical scholarship, and when the practical question of an ocean voyage to Asia was pressing for solution, such a point could no longer fail to attract attention; and it happened fortunately that the wet theory, no less than the dry theory, had a popular advocate among those classical authors to whose authority so much deference was paid.

[1] Just as our grandfathers used to read the Bible without noticing such points as the divergences between the books of Kings and Chronicles, the contradictions between the genealogies of Jesus in Matthew and Luke, the radically different theories of Christ's personality and career in the Fourth Gospel as compared with the three Synoptics, etc.

If the Portuguese mariners of the generation before Columbus had acquiesced in Ptolemy's views as final, they surely would not have devoted their energies to the task of circumnavigating Africa. But there were yet other theoretical or fanciful obstacles in the way. When you look at a modern map of the world, the "five zones" may seem like a mere graphic device for marking conveniently the relations of different regions to the solar source of heat; but before the great Portuguese voyages and the epoch-making third voyage of Vespucius, to be described hereafter, a discouraging doctrine was entertained with regard to these zones. Ancient travellers in Scythia and voyagers to "Thule" — which in Ptolemy's scheme perhaps meant the Shetland isles [1] — had learned something of Arctic phenomena. The long winter nights,[2] the snow and ice, and the bitter winds, made a deep impression upon visitors from the Mediterranean; [3] and

Ancient theory of the five zones.

[1] Bunbury, *op. cit.* vol. ii. pp. 492, 527. The name is used in different geographical senses by various ancient writers, as is well shown in Lewis's *Astronomy of the Ancients*, pp. 467–481.

[2] The Romans, at least by the first century A. D., knew also of the shortness of northern nights in summer.

> Arma quidem ultra
> Littora Invernæ promovimus, et modo captas
> Orcadas, ac minima contentos nocte Britannos.
> Juvenal, ii. 159.

See also Pliny, *Hist. Nat.*, iv. 30; Martianus Capella, vi. 595; Achilles Tatius, xxxv.

[3] The reader will remember Virgil's magnificent description of a Scythian winter (*Georg.*, iii. 352): —

> Illic clausa tenent stabulis armenta; neque ullæ
> Aut herbæ campo apparent, aut arbore frondes:
> Sed jacet aggeribus niveis informis, et alto
> Terra gelu late, septemque assurgit in ulnas;

when such facts were contrasted with the scorching blasts that came from Sahara, the resulting theory was undeniably plausible. In the extreme north the ocean must be frozen and the country uninhabitable by reason of the cold; contrariwise, in the far south the ocean must be boiling hot and the country inhabitable only by gnomes and salamanders. Applying these ideas to the conception of the earth as a sphere, Pomponius Mela tells us that the surface of the sphere is divided into five zones, of which only two are fit to support human life. About each pole stretches a dead and frozen zone; the southern and northern hemispheres have each a temperate zone, with the same changes of seasons, but not occurring at the

Semper hiems, semper spirantes frigora Cauri.
Tum Sol pallentes haud unquam discutit umbras;
Nec cum invectus equis altum petit æthera, nec cum
Præcipitem Oceani rubro lavit æquore currum.
Concrescunt subitæ currenti in flumine crustæ;
Undaque jam tergo ferratos sustinet orbes,
Puppibus illa prius patulis, nunc hospita plaustris,
Æraque dissiliunt vulgo, vestesque rigescunt
Indutæ, cæduntque securibus humida vina
Et totæ solidam in glaciem vertêre lacunæ,
Stiriaque impexis induruit horrida barbis.
Interea toto non secius aëre ningit;
Intereunt pecudes; stant circumfusa pruinis
Corpora magna boum; confertoque agmine cervi
Torpent mole nova, et summis vix cornibus exstant.
. . . . . .
Ipsi in defossis specubus, secura sub alta
Otia agunt terra, congestaque robora, totasque
Advolvere focis ulmos, ignique dedere.
Hic noctem ludo ducunt, et pocula læti
Fermento atque acidis imitantur vitea sorbis.
Talis Hyperboreo Septem subjecta trioni
Gens effræna virûm Rhipæo tunditur Euro,
Et pecudum fulvis velantur corpora sætis.

The Roman conception of the situation of these "Hyperboreans" and of the Rhipæan mountains may be seen in the map of Mela's world.

same (but opposite) times; the north temperate zone is the seat of the Œcumene (οἰκουμένη), or Inhabited World; the south temperate zone is also inhabited by the Antichthones or Antipodes, but about these people we know nothing, because between us and them there intervenes the burning zone, which it is impossible to cross.[1]

The Inhabited World and the Antipodes.

This notion of an antipodal world in the southern hemisphere will have especial interest for us when we come to deal with the voyages of Vespucius. The idea seems to have originated in a guess of Hipparchus that Taprobane — the island of Ceylon, about which the most absurd reports were brought to Europe — might be the beginning of another world. This is very probable, says Mela, with delightful *naïveté*, because Taprobane is inhabited, and still we do not know of anybody who has ever made the tour of it.[2] Mela's con-

[1] "Huic medio terra sublimis cingitur undique mari: eodemque in duo latera, quæ hemisphæria nominantur, ab oriente divisa ad occasum, zonis quinque distinguitur. Mediam æstus infestat, frigus ultimas: reliquæ habitabiles paria agunt anni tempora, verum non pariter. Antichthones alteram, nos alteram incolimus. Illius situ ab ardorem intercedentis plagæ incognito, hujus dicendus est." etc. *De Situ Orbis*, i. 1. A similar theory is set forth by Ovid (*Metamorph.*, i. 45), and by Virgil (*Georg.*, i. 233): —

> Quinque tenent cœlum zonæ; quarum una corusco
> Semper Sole rubens, et torrida semper ab igni;
> Quam circum extremæ dextra lævaque trahuntur,
> Cærulea glacie concretæ atque imbribus atris.
> Has inter mediamque, duæ mortalibus ægris
> Munere concessæ Divûm; et via secta per ambas,
> Obliquus qua se signorum verteret ordo.

[2] "Taprobane aut grandis admodum insula aut prima pars orbis alterius Hipparcho dicitur; sed quia habitata, nec quisquam circummeasse traditur, prope verum est." *De Situ Orbis*, iii. 7.

temporary, the elder Pliny, declares that Taprobane "has long been regarded" as part of another world, the name of which is Antichthon, or Opposite-Earth;[1] at the same time Pliny vouchsafes three closely-printed pages of information about this mysterious country. Throughout the Middle Ages the conception of some sort of an antipodal inhabited world was vaguely entertained by writers here and there, but many of the clergy condemned it as implying the existence of people cut off from the knowledge of the gospel and not included in the plan of salvation.

Curious notions about Ceylon.

As to the possibility of crossing the torrid zone, opinion was not unanimous. Greek explorers from Alexandria (cir. B. C. 100) seem to have gone far up the Nile toward the equator, and the astronomer Geminus quotes their testimony in proof of his opinion that the torrid zone is inhabitable.[2] Panætius, the friend of the younger Scipio Africanus, had already expressed a similar opinion. But the flaming theory prevailed. Macrobius, writing about six hundred years later, maintained that the southernmost limit of the habitable earth was 850 miles south of Syene, which lies just under the tropic of Cancer.[3] Beyond this point no man could go without danger from the

[1] "Taprobanen alterum orbem terrarum esse, diu existimatum est, Antichthonum appellatione." *Hist. Nat.*, vi. 24.

[2] Geminus, *Isagoge*, cap. 13.

[3] Macrobius, *Somnium Scipionis*, ii. 8. Strabo (ii. 5, §§ 7, 8) sets the southern boundary of the Inhabited World 800 miles south of Syene, and the northern boundary at the north of Ireland.

fiery atmosphere. Beyond some such latitude on the ocean no ship could venture without risk of being engulfed in some steaming whirlpool.[1] Such was the common belief before the great voyages of the Portuguese.

The fiery zone.

Besides this dread of the burning zone, another fanciful obstacle beset the mariner who proposed to undertake a long voyage upon the outer ocean. It had been observed that a ship which disappears in the offing seems to be going downhill; and many people feared that if they should happen thus to descend too far away from the land they could never get back again. Men accustomed to inland sea travel did not feel this dread within the regions of which they had experience, but it assailed them whenever they thought of braving the mighty waters outside.[2] Thus the

Going downhill.

[1] Another notion, less easily explicable and less commonly entertained, but interesting for its literary associations, was the notion of a mountain of loadstone in the Indian ocean, which prevented access to the torrid zone by drawing the nails from ships and thus wrecking them. This imaginary mountain, with some variations in the description, is made to carry a serious geographical argument by the astrologer Pietro d' Abano, in his book *Conciliator Differentiarum*, written about 1312. (See Major, *Prince Henry the Navigator*, p. 100.) It plays an important part in one of the finest tales in the *Arabian Nights*, — the story of the "Third Royal Mendicant."

[2] Ferdinand Columbus tells us that this objection was urged against the Portuguese captains and afterwards against his father: "E altri di ciò quasi così disputavano, come già i Portoghesi intorno al navigare in Guinea; dicendo che, se si allargasse alcuno a far cammino diritto al occidente, come l' Ammiraglio diceva, non potrebbe poi tornare in Ispagna per la rotondità della sfera; tenendo per certissime, che qualunque uscisse del emisperio conosciuto da Tolomeo, anderebbe in giù, e poi gli sarebbe impossibile dar la volta; e affermando che ciò sarebbe quasi uno

master mariner, in the Middle Ages, might contemplate the possible chance of being drawn by force of gravity into the fiery gulf, should he rashly approach too near; and in such misgivings he would be confirmed by Virgil, who was as much read then as he is to-day and esteemed an authority, withal, on scientific questions; for according to Virgil the Inhabited World descends toward the equator and has its apex in the extreme north.[1]

To such notions as these, which were supposed to have some sort of scientific basis, we must add the wild superstitious fancies that clustered about all remote and unvisited corners of the world. In maps made in the fifteenth and sixteenth centuries, in such places as we should label "Unexplored Region," there were commonly depicted uncouth shapes of "Gorgons and Hydras and Chi-

ascendere all' insù di un monte. Il che non potrebbono fare i navigli con grandissimo vento." *Vita dell' Ammiraglio*, Venice, 1571, cap. xii. The same thing is told, in almost the same words, by Las Casas, since both writers followed the same original documents: "Añidian mas, que quien navegase por vía derecha la vuelta del poniente, como el Cristóbal Colon proferia, no podria despues volver, suponiendo que el mundo era redondo y yendo hácia el occidente iban cuesta abajo, y saliendo del hemisferio que Ptolomeo escribiò, á la vuelta érales necesario subir cuesta arriba, lo que los navíos era imposible hacer." The gentle but keen sarcasm that follows is very characteristic of Las Casas: "Esta era gentil y profunda razon, y señal de haber bien el negocio entendido!" *Historia de las Indias*, tom. i. p. 230.

[1] Mundus, ut ad Scythiam Rhipæasque arduus arces
Consurgit, premitur Libyæ devexus in austros.
Hic vertex nobis semper sublimis; at illum
Sub pedibus Styx atra videt Manesque profundi.
Georg., i. 240.

For an account of the deference paid to Virgil in the Middle Ages, as well as the grotesque fancies about him, see Tunison's *Master Virgil*, 2d ed., Cincinnati, 1890.

mæras dire," furnishing eloquent testimony to the feelings with which the unknown was regarded.

Superstitious fancies.

The barren wastes of the Sea of Darkness awakened a shuddering dread like that with which children shrink from the gloom of a cellar. When we remember all these things, and consider how the intelligent purpose which urged the commanders onward was scarcely within the comprehension of their ignorant and refractory crews, we can begin to form some idea of the difficulties that confronted the brave mariners who first sought an ocean route to the far-off shores of Cathay.

Less formidable than these obstacles based on fallacious reasoning or superstitious whim were those that were furnished by the clumsiness of the ships and the crudeness of the appliances for navigation. As already observed, the Spanish and Portuguese caravels of the fifteenth century were

Clumsiness of the caravels.

less swift and manageable craft than the Norwegian "dragons" of the tenth. Mere yachts in size we should call them, but far from yachtlike in shape or nimbleness. With their length seldom more than thrice their width of beam, with narrow tower-like poops, with broad-shouldered bows and bowsprit weighed down with spritsail yards, and with no canvas higher than a topsail, these clumsy caravels could make but little progress against headwinds, and the amount of tacking and beating to and fro was sometimes enough to quadruple the length of the voyage. For want of metallic sheathing below the water-line the ship was liable to be sunk by the terrible

worm which, in Hakluyt's phrase, "many times pearceth and eateth through the strongest oake." For want of vegetable food in the larder, or anything save the driest of bread and beef stiffened with brine, the sailors were sure to be attacked by scurvy, and in a very long voyage the crew was deemed fortunate that did not lose half its number from that foul disease. Often in traversing unknown seas the sturdy men who survived all other perils were brought face to face with starvation when they had ventured too far without turning back.[1] We need not wonder that the first steps in oceanic discovery were slow and painful.

Famine and scurvy.

First among the instruments without which systematic ocean navigation would have been impossible, the magnetic compass had been introduced into southern Europe and was used by Biscayan and Catalan sailors before the end of the twelfth century.[2] Parties of Crusaders had learned the virtues of the suspended needle from the Arabs, who are said to have got their knowledge indirectly from China in the course of their eastern voyages.[3] It seems to have been

The mariner's compass.

[1] Or simply because a wrong course happened to be taken, through ignorance of atmospheric conditions, as in the second homeward and third outward voyages of Columbus. See below, pp. 485, 490.

[2] Navarrete, *Discurso historico sobre los progresos del arte de navegar en España*, p. 28; see also Raymond Lully's treatise, *Libro felix, ó Maravillas del mundo* (A. D. 1286).

[3] See Humboldt's *Kosmos*, bd. i. p. 294; Klaproth, *Lettre à M. de Humboldt sur l'invention de la boussole*, pp. 41, 45, 50, 66, 79, 90. But some of Klaproth's conclusions have been doubted: "Pour la boussole, rien ne prouve que les Chinois l'aient em-

at Amalfi that the needle was first enclosed in a box and connected with a graduated compass-card. Apparently it had not come into general use in the middle of the thirteenth century, for in 1258 the famous Brunetto Latini, afterwards tutor of Dante, made a visit to Roger Bacon, of which he gives a description in a letter to his friend the poet Guido Cavalcanti: "The Parliament being summoned to assemble at Oxford, I did not fail to see Friar Bacon as soon as I arrived, and (among other things) he showed me a black ugly stone called a magnet, which has the surprising property of drawing iron to it; and upon which, if a needle be rubbed, and afterwards fastened to a straw so that it shall swim upon water, the needle will instantly turn toward the Pole-star: therefore, be the night ever so dark, so that neither moon nor star be visible, yet shall the mariner be able, by the help of this needle, to steer his vessel aright. This discovery, which appears useful in so great a degree to all who travel by sea, must remain concealed until other times; because no master mariner dares to use it lest he should fall under the imputation of being a magician; nor would the sailors venture themselves out to sea under his command, if he took with him an instrument which carries so great an appearance of being constructed under the influence of some infernal spirit.[1] A

ployée pour la navigation, tandis que nous la trouvons dès le xi^e^ siècle chez les Arabes qui s'en servent non seulement dans leurs traversées maritimes, mais dans les voyages de caravanes au milieu des déserts," etc. Sédillot, *Histoire des Arabes*, tom. ii. p. 130.

[1] Is it not a curious instance of human perve..sity that while

time may arrive when these prejudices, which are of such great hindrance to researches into the secrets of nature, will be overcome: and it will be then that mankind shall reap the benefit of the labours of such learned men as Friar Bacon, and do justice to that industry and intelligence for which he and they now meet with no other return than obloquy and reproach." [1]

That time was after all not so long in arriving, for by the end of the thirteenth century the compass had come to be quite generally used,[2] and the direction of a ship's course could be watched continuously in foul and fair weather alike. For taking the sun's altitude rude astrolabes and jack-staffs were in use, very crazy affairs as compared with the modern quadrant, but sufficiently accurate to enable a well-trained observer, in calculating his latitude, to get somewhere within two or three degrees of the truth. In calculating longitude the error was apt to be much greater, for in the absence of chronometers there were no accurate means for marking differences in time. It was necessary to depend upon the dead-reckoning, and the custom was first to sail due north or south to the parallel of the place of destination and then to turn at right angles and

Latitude and longitude.

customary usage from time immemorial has characterized as "acts of God" such horrible events as famines, pestilences, and earthquakes, on the other hand when some purely beneficent invention has appeared, such as the mariner's compass or the printing press, it has commonly been accredited to the Devil? The case of Dr. Faustus is the most familiar example.

[1] This version is cited from Major's *Prince Henry the Navigator*, p. 58.

[2] Hüllmann, *Städtewesen des Mittelalters*, bd. i. pp. 125–137.

sail due east or west. Errors of eight or even ten degrees were not uncommon. Thus at the end of a long outward voyage the ship might find itself a hundred miles or more to the north or south, and six or seven hundred miles to the east or west, of the point at which it had been aimed. Under all these difficulties, the approximations made to correct sailing by the most skilful mariners were sometimes wonderful. Doubtless this very poverty of resources served to sharpen their watchful sagacity.[1] To sail the seas was in those days a task requiring high mental equipment; it was no work for your commonplace skipper. Human faculty was taxed to its utmost, and human courage has never been more grandly displayed than by the glorious sailors of the fifteenth and sixteenth centuries.

We are now prepared to appreciate the character of the work that was done in the course of the first attempts to find an oceanic route from Europe to Asia. Then, as in other great epochs of history, men of genius arose to meet the occasion. In 1394 was born Prince Henry of Portugal, since known as Henry the Navigator.[2] He was fourth son of King John I.,

Prince Henry the Navigator, 1394–1463.

[1] Compare the remarks of Mr. Clark Russell on the mariners of the seventeenth century, in his *William Dampier*, p. 12.

[2] My chief authorities for the achievements of Prince Henry and his successors are the Portuguese historians, Barros and Azurara. The best edition of the former is a modern one, Barros y Couto, *Decadas da Asia, nova edicão con Indice geral*, Lisbon, 1778–88, 24 vols. 12mo. I also refer sometimes to the Lisbon, 1752, edition of the *Decada primeira*, in folio. The priceless contemporary work of Azurara, written in 1453 under Prince Henry's direction, was not printed until the present century: Azurara,

the valiant and prudent king under whom began the golden age of Portugal, which lasted until the conquest of that country in 1580 by Philip II. of Spain. Henry's mother was Philippa, daughter of John of Gaunt. He was therefore cousin to our own Henry V. of England, whom he quite equalled in genius, while the laurels that he won were more glorious than those of Agincourt. In 1415, being then in his twenty-first year, Prince Henry played a distinguished part in the expedition which captured Ceuta from the Moors. While in Morocco he gathered such information as he could concerning the interior of the continent; he learned something about the oases of Sahara, the distant river Gambia, and the caravan trade between Tunis and Timbuctoo, whereby gold was carried from the Guinea coast to Mussulman ports on the Mediterranean. If this coast could be reached by sea, its gold might be brought to Lisbon as well. To divert such treasure from the infidel and secure it for a Christian nation was an enterprise fitted to kindle a prince's enthusiasm. While Henry felt the full force of these considerations, his thoughts took a wider range. The views of Pomponius Mela had always been held in high esteem by scholars of the Spanish peninsula,[1] and down past that Gold Coast Prince Henry saw

Chronica do Descobrimento e Conquista de Guiné, Paris, 1841, a superb edition in royal quarto, edited by the Viscount da Carreira, with introduction and notes by the Viscount de Santarem.

[1] Partly, perhaps, because Mela was himself a Spaniard, and partly because his opinions had been shared and supported by St. Isidore, of Seville (A. D. 570–636), whose learned works exercised immense authority throughout the Middle Ages. It is in one of

the ocean route to the Indies, the road whereby a vast empire might be won for Portugal and millions of wandering heathen souls might be gathered into the fold of Christ. To doubt the sincerity of the latter motive, or to belittle its influence, would be to do injustice to Prince Henry, — such cynical injustice as our hard-headed age is only too apt to mete out to that romantic time and the fresh enthusiasm which inspired its heroic performances. Prince Henry was earnest, conscientious, large-minded, and in the best sense devout; and there can be no question that in his mind, as in that of Columbus, and (with somewhat more alloy) in the minds of Cortes and others, the desire of converting the heathen and strengthening the Church served as a most powerful incentive to the actions which in the course of little more than a century quite changed the face of the world.

His idea of an ocean route to the Indies, and what it might bring.

Filled with such lofty and generous thoughts, Prince Henry, on his return from Morocco, in 1418, chose for himself a secluded place of abode where he could devote himself to his purposes undisturbed by the court life at Lisbon or by political solicitations of whatever sort. In the Morocco campaign he had won such military renown that he was now invited by Pope Martin V. to take chief command of the papal army; and presently he received similar flattering offers from his own cousin, Henry V. of England, from John II. of

St. Isidore's books (*Etymologiarum*, xiii. 16, apud Migne, *Patrologia*, tom. lxxxii. col. 484) that we first find the word "Mediterranean" used as a proper name for that great land-locked sea.

Castile, and from the Emperor Sigismund, who, for shamefully violating his imperial word and permitting the burning of John Huss, was now sorely pressed by the enraged and rebellious Bohemians. Such invitations had no charm for Henry. Refusing them one and all, he retired to the promontory of Sagres, in the southernmost province of Portugal, the ancient kingdom of Algarve, of which his father now appointed him governor. That lonely and barren rock, protruding into the ocean, had long ago impressed the imagination of Greek and Roman writers; they called it the Sacred Promontory, and supposed it to be the westernmost limit of the habitable earth.[1] There the young prince proceeded to build an astronomical observatory, the first that his country had ever seen, and to gather about him a school of men competent to teach and men eager to learn the mysteries of map-making and the art of navigation. There he spent the greater part of his life; thence he sent forth his captains to plough the southern seas; and as year after year the weather-beaten ships returned from their venturesome pilgrimage, the first glimpse of home that greeted them was likely to be the beacon-light in the tower where the master sat poring over problems of Archimedes or watching the stars. For Henry, whose motto was "Talent de bien faire," or (in the old French usage) "Desire[2] to do well,"

The Sacred Promontory.

[1] Ὁμοίως δὲ καὶ περὶ τῆς ἕξω στηλῶν λέγεται· δυσμικώτατον μὲν γὰρ σημεῖον τῆς οἰκουμένης, τὸ τῶν Ἰβήρων ἀκρωτήριον, ὃ καλοῦσιν Ἱερόν. Strabo, ii. 5, § 14; cf. Dionysius Periegetes, v. 161. In reality it lies not quite so far west as the country around Lisbon.

[2] See Littré, *Dictionnaire*, s. v. "Talent;" Du Cange, *Glossa-*

was wont to throw himself whole-hearted into whatever he undertook, and the study of astronomy and mathematics he pursued so zealously as to reach a foremost place among the experts of his time. With such tastes and such ambition, he was singularly fortunate in wielding ample pecuniary resources; if such a combination could be more often realized, the welfare of mankind would be notably enhanced. Prince Henry was Grand Master of the Order of Christ, an organization half military, half religious, and out of its abundant revenues he made the appropriations needful for the worthy purpose of advancing the interests of science, converting the heathen, and winning a commercial empire for Portugal. At first he had to encounter the usual opposition to lavish expenditure for a distant object without hope of immediate returns; but after a while his dogged perseverance began to be rewarded with such successes as to silence all adverse comment.

The first work in hand was the rediscovery of coasts and islands that had ceased to be visited even before the breaking up of the Roman Empire. For more than a thousand years the Madeiras and Canaries had been wellnigh forgotten, and upon the coast of the African continent no ship ventured beyond Cape Non, the headland so named because it said "No!" to the wistful mariner.[1] There

The Madeira and Canary islands.

rium, "talentum, animi decretum, voluntas, desiderium, cupiditas," etc.; cf. Raynouard, *Glossaire Provençale*, tom. v p. 296. French was then fashionable at court, in Lisbon as well as in London.

[1] The Portuguese proverb was "Quem passar o Cabo de Não

had been some re-awakening of maritime activity in the course of the fourteenth century, chiefly due, no doubt, to the use of the compass. Between 1317 and 1351 certain Portuguese ships, with Genoese pilots, had visited not only the Madeiras and Canaries, but even the Azores, a thousand miles out in the Atlantic; and these groups of islands are duly laid down upon the so-called Medici map of 1351, preserved in the Laurentian library at Florence.[1] The voyage to the Azores was probably the greatest feat of ocean navigation that had been performed down to that time, but it was not followed by colonization. Again, somewhere about 1377 Madeira seems to have been visited by Robert Machin, an Englishman, whose adventures make a most romantic story; and in 1402 the Norman knight, Jean de Béthencourt, had begun to found a colony in the Canaries, for which, in return for aid and supplies, he did homage to the King of Castile.[2] As for the African

ou voltará ou *não*," i. e. "Whoever passes Cape *Non* will return or *not*." See Las Casas, *Hist. de las Indias*, tom. i. p. 173; Mariana, *Hist. de España*, tom. i. p. 91; Barros, tom. i. p. 36.

[1] An engraved copy of this map may be found in Major's *Prince Henry the Navigator*, London, 1868, facing p. 107. I need hardly say that in all that relates to the Portuguese voyages I am under great obligation to Mr. Major's profoundly learned and critical researches. He has fairly conquered this subject and made it his own, and whoever touches it after him, however lightly, must always owe him a tribute of acknowledgment.

[2] See Bontier and Le Verrier, *The Canarian, or, Book of the Conquest and Conversion of the Canaries*, translated and edited by R. H. Major, London, 1872 (Hakluyt Soc.). In 1414, Béthencourt's nephew, left in charge of these islands, sold them to Prince Henry, but Castile persisted in claiming them, and at length in 1479 her claim was recognized by treaty with Portugal.

coast, Cape Non had also been passed at some time during the fourteenth century, for Cape Bojador is laid down on the Catalan map of 1375 ; but beyond that point no one had dared take the risks of the unknown sea.

The first achievement under Prince Henry's guidance was the final rediscovery and colonization of Porto Santo and Madeira in 1418–25 by Gonsalvez Zarco, Tristam Vaz, and Bartholomew Perestrelo.[1] This work occupied the prince's attention for some years, and then came up the problem of Cape Bojador. The difficulty was twofold ;

Of all the African islands, therefore, the Canaries alone came to belong, and still belong, to Spain.

[1] Perestrelo had with him a female rabbit which littered on the voyage, and being landed, with her young, at Porto Santo, forthwith illustrated the fearful rate of multiplication of which organisms are capable in the absence of enemies or other adverse circumstances to check it. (Darwin, *Origin of Species*, chap. iii.) These rabbits swarmed all over the island and devoured every green and succulent thing, insomuch that they came near converting it into a desert. Prince Henry's enemies, who were vexed at the expenditure of money in such colonizing enterprises, were thus furnished with a wonderful argument. They maintained that God had evidently created those islands for beasts alone, not for men! "En este tiempo habia en todo Portugal grandísimas murmuraciones del Infante, viéndole tan cudicioso y poner tanta diligencia en el descubrir de la tierra y costa de África, diciendo que destruia el reino en los gastos que hacia, y consumia los vecinos dél en poner en tanto peligro y daño la gente portoguesa, donde muchos morian, enviándolos en demanda de tierras que nunca los reyes de España pasados se atrevieron á emprender, donde habia de hacer muchas viudas y huérfanos con esta su porfia. Tomaban por argumento, que Dios no habia criado aquellas tierras sino para bestias, pùes en tan poco tiempo en aquella isla tantos conejos habia multiplicado, que no dejaban cosa que para sustentacion de los hombres fuese menester." Las Casas, *Hist. de las Indias*, tom. i. p. 180. See also Azurara, *Chronica do descobrimento e conquista de Guiné*, cap. lxxxiii.

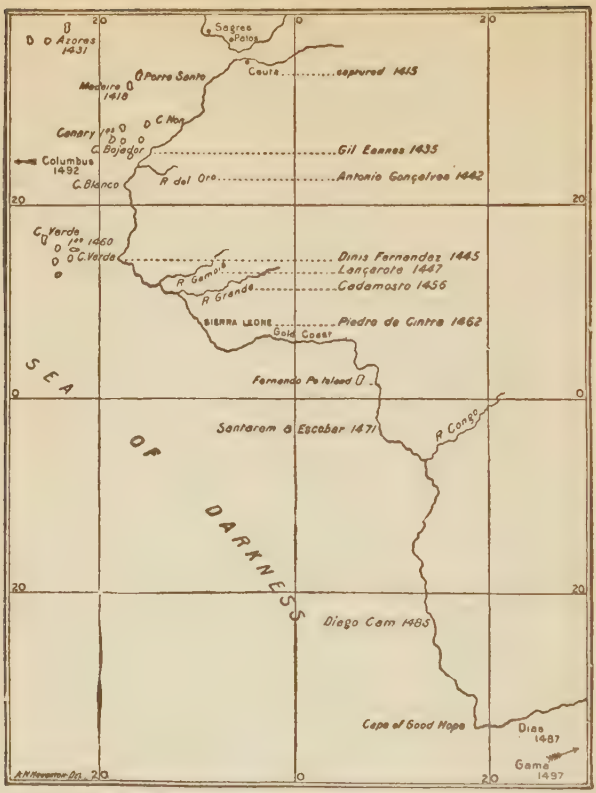
the waves about that headland were apt to be boisterous, and wild sailor's fancies were apt to enkindle a mutinous spirit in the crews. It was not until 1433–35 that Gil Eannes, a commander of unusually clear head and steady nerves, made three attempts and fairly passed the dreaded spot. In the first attempt he failed, as his predecessors had done, to double the cape; in the second attempt he doubled it; in the third he sailed nearly two hundred miles beyond.

Gil Eannes passes Cape Bojador.

This achievement of Gil Eannes (*anglicè*, plain Giles Jones) marks an era. It was the beginning of great things. When we think of the hesitation with which this step was taken, and the vociferous applause that greeted the successful captain, it is strange to reflect that babes were already born in 1435 who were to live to hear of the prodigious voyages of Columbus and Gama, Vespucius and Magellan. After seven years a further step was taken in advance; in 1442 Antonio Gonçalves brought gold and negro slaves from the Rio d' Ouro, or Rio del Oro, four hundred miles beyond Cape Bojador. Of this beginning of the modern slave-trade I shall treat in a future chapter.[1] Let it suffice here to observe that Prince Henry did not discourage but sanctioned it. The first aspect which this baleful traffic assumed in his mind was that of a means for converting the heathen, by bringing black men and women to Portugal to be taught the true faith and the ways of civilized people, that they might in due season be sent back to their native

Beginning of the modern slave-trade, 1442.

[1] See below, vol. ii. pp. 429–431.



Portuguese voyages on the coast of Africa.

land to instruct their heathen brethren. The kings of Portugal should have a Christian empire in Africa, and in course of time the good work might be extended to the Indies. Accordingly a special message was sent to Pope Eugenius IV., informing him of the discovery of the country of these barbar-

Papal grant of heathen countries to the Portuguese crown.

ous people beyond the limits of the Mussulman world, and asking for a grant in perpetuity to Portugal of all heathen lands that might be discovered in further voyages beyond Cape Bojador, even so far as to include the Indies.[1] The request found favour in the eyes of Eugenius, and the grant was solemnly confirmed by succeeding popes. To these proceedings we shall again have occasion to refer. We have here to observe that the discovery of gold and the profits of the slave-trade — though it was as yet conducted upon a very small scale — served to increase the interest of the Portuguese people in Prince Henry's work and to diminish the obstacles in his way. A succession of gallant captains, whose names make a glorious roll of honour, carried on the work of exploration, reaching the farthest point that had been attained by the ancients. In 1445 Dinis Fernandez passed

[1] "En el año de 1442, viendo el Infante que se habia pasado el cabo del Boxador y que la tierra iba muy adelante, y que todos los navíos que inviaba traian muchos esclavos moros, con que pagaba los gastos que hacia y que cada dia crecia más el provecho y se prosperaba su amada negociacion, determinó de inviar á suplicar al Papa Martino V., . . . que hiciese gracia á la Corona real de Portogal de los remos y señoríos que habia y hobiese desde el cabo del Boxador adelante, hácia el Oriente y la India inclusive; y ansí se las concedió, . . . con todas las tierras, puertos, islas, tratos, rescates, pesquerías y cosas á esto pertenecientes, poniendo censuras y penas á todos los reyes cristianos, príncipes, y señores y comunidades que á esto le perturbasen; despues, dicen, que los sumos pontífices, sucesores de Martino, como Eugenio IV. y Nicolas V. y Calixto IV. lo confirmaron." Las Casas, *Hist. de las Indias*, tom. i. p. 185. The name of Martin V. is a slip of the memory on the part of Las Casas. That pope had died of apoplexy eleven years before. It was Eugenius IV. who made this memorable grant to the crown of Portugal. The error is repeated in Irving's *Columbus*, vol. i. p. 339.

Cape Verde, and two years later Lançarote found the mouth of the Gambia. In 1456 Luigi Cadamosto — a Venetian captain in the service of Portugal — went as far as the Rio Grande; in 1460 Diego Gomez discovered the Cape Verde islands; and in 1462 Piedro de Cintra reached Sierra Leone.[1] At the same time, in various expeditions between 1431 and 1466, the Azores (i. e. "Hawk" islands) were rediscovered and colonized, and voyages out into the Sea of Darkness began to lose something of their manifold terrors.

Advance to Sierra Leone.

Prince Henry did not live to see Africa circumnavigated. At the time of his death, in 1463, his ships had not gone farther than the spot where Hanno found his gorillas two thousand years before. But the work of this excellent prince did not end with his death. His adventurous spirit lived on in the school of accomplished navigators he had trained. Many voyages were made after 1462, of which we need mention only those that marked new stages of discovery. In 1471 two knights of the royal household, João de Santarem and Pedro de Escobar, sailed down the Gold Coast and crossed the equator; three years later the line was again crossed by Fernando Po, discoverer of the island that bears his name. In 1484 Diego Cam went on as far as the mouth of the Congo, and entered into

Advance to the Hottentot coast.

[1] The first published account of the voyages of Cadamosto and Cintra was in the *Paesi nouamente retrouati*, Vicenza, 1507, a small quarto which can now sometimes be bought for from twelve to fifteen hundred dollars. See also Grynæus, *Novus Orbis*, Basel, 1532.

very friendly relations with the negroes there. In a second voyage in 1485 this enterprising captain pushed on a thousand miles farther, and set up a cross in 22° south latitude on the coast of the Hottentot country. Brisk trading went on along the Gold Coast, and missionaries were sent to the Congo.[1]

[1] It was in the course of these voyages upon the African coast that civilized Europeans first became familiar with people below the upper status of barbarism. Savagery and barbarism of the lower types were practically unknown in the Middle Ages, and almost, though probably not quite unknown, to the civilized peoples of the Mediterranean in ancient times. The history of the two words is interesting. The Greek word *βάρβαρος*, whence Eng. *barbarian* (= Sanskrit *barbara*, Latin *balbus*), means "a stammerer," or one who talks gibberish, i. e. in a language we do not understand. Aristophanes (*Aves*, 199) very prettily applies the epithet to the inarticulate singing of birds. The names *Welsh*, *Walloon*, *Wallachian*, and *Belooch*, given to these peoples by their neighbours, have precisely the same meaning (Kuhn's *Zeitschrift*, ii. 252); and in like manner the Russians call the Germans *Nyemetch*, or people who cannot talk (Schafarik, *Slawische Alterthumer*, i. 443; Pott, *Etym. Forsch.*, ii. 521). The Greeks called all men but themselves barbarians, including such civilized people as the Persians. The Romans applied the name to all tribes and nations outside the limits of the Empire, and the Italians of the later Middle Ages bestowed it upon all nations outside of Italy. Upon its lax use in recent times I have already commented (above, pp. 25–35). The tendency to apply the epithet to savages is modern. The word *savage*, on the other hand, which came to us as the Old French *sauvage* or *salvage* (Ital. *selvaggio*, *salvatico*), is the Latin *silvaticus*, *sylvaticus*, *salvaticus*, that which pertains to a forest and is sylvan or wild. In its earliest usage it had reference to plants and beasts rather than to men. Wild apples, pears, or laurels are characterized by the epithet *sylvaticus* in Varro, *De re rustica*, i. 40; and either this adjective, or its equivalent *silvestris*, was used of wild animals as contrasted with domesticated beasts, as wild sheep and wild fowl, in Columella, vii. 2; viii. 12, or wolves, in Propertius, iii. 7, or mice, in Pliny, xxx. 22. (Occasionally it is used of men, as in Pliny, viii. 79.) The meaning was the same in

These voyages into the southern hemisphere dealt a damaging blow to the theory of an impas-

mediæval Latin (Du Cange, *Glossarium*, Niort, 1886, tom. vii. p. 686) and in Old French, as "La douce voiz du loussignol sauvage" (Michel, *Chansons de chatelain de Coucy*, xix.). In the romance of *Robert le Diable*, in the verses

> Sire, se vos fustes Sauvages
> Viers moi, je n'i pris mie garde, etc.,

the reference is plainly to degenerate civilized men frequenting the forests, such as bandits or outlaws, not to what we call savages.

Mediæval writers certainly had some idea of savages, but it was not based upon any actual acquaintance with such people, but upon imperfectly apprehended statements of ancient writers. At the famous ball at the Hotel de Saint Pol in Paris, in 1393, King Charles VI. and five noblemen were dressed in close-fitting suits of linen, thickly covered from head to foot with tow or flax, the colour of hair, so as to look like "savages." In this attire nobody recognized them, and the Duke of Orleans, in his eagerness to make out who they were, brought a torch too near, so that the flax took fire, and four of the noblemen were burned to death. See Froissart's *Chronicles*, tr. Johnes, London, 1806, vol. xi. pp. 69–76. The point of the story is that savages were supposed to be men covered with hair, like beasts, and Froissart, in relating it, evidently knew no better. Whence came this notion of hairy men? Probably from Hanno's gorillas (see above, p. 301), through Pliny, whose huge farrago of facts and fancies was a sort of household Peter Parley in mediæval monasteries. Pliny speaks repeatedly of men covered with hair from head to foot, and scatters them about according to his fancy, in Carmania and other distant places (*Hist. Nat.*, vi. 28, 36, vii. 2).

Greek and Roman writers seem to have had some slight knowledge of savagery and the lower status of barbarism as prevailing in remote places ("Ptolomée dit que es extremités de la terre habitable sont gens sauvages," Oresme, *Les Éthiques d'Aristote*, Paris, 1488), but their remarks are usually vague. Seldom do we get such a clean-cut statement as that of Tacitus about the Finns, that they have neither horses nor houses, sleep on the ground, are clothed in skins, live by the chase, and for want of iron use bone-tipped arrows (*Germania*, cap. 46). More often we have unconscionable yarns about men without noses, or with only one

sable fiery zone; but as to the circumnavigability of the African continent, the long stretch of coast beyond the equator seemed more in harmony with Ptolemy's views than with those of Mela. The eastward trend of the Guinea coast was at first in favour of the latter geographer, but when Santarem and Escobar found it turning southward to the equator the facts began to refute him. According to Mela

Effect of these discoveries upon the theories of Ptolemy and Mela.

eye, tailed men, solid-hoofed men, Amazons, and parthenogenesis. The Troglodytes, or Cave-dwellers, on the Nubian coast of the Red Sea seem to have been in the middle status of barbarism (Diodorus, iii. 32; Agatharchides, 61–63), and the Ichthyophagi, or Fish-eaters, whom Nearchus found on the shores of Gedrosia (Arrian, *Indica*, cap. 29), were probably in a lower stage, perhaps true savages. It is exceedingly curious that Mela puts a race of pygmies at the headwaters of the Nile (see map above, p. 304). Is this only an echo from *Iliad*, iii. 6, or can any ancient traveller have penetrated far enough inland toward the equator to have heard reports of the dwarfish race lately visited by Stanley (*In Darkest Africa*, vol. ii. pp. 100–104, 164)? Strabo had no real knowledge of savagery in Africa (cf. Bunbury, *Hist. Ancient Geog.*, ii. 331). Sataspes may have seen barbarians of low type, possibly on one of the Canary isles (see description of Canarians in Major's *Prince Henry*, p. 212). Ptolemy had heard of an island of cannibals in the Indian ocean, perhaps one of the Andaman group, visited A. D. 1293 by Marco Polo. The people of these islands rank among the lowest savages on the earth, and Marco was disgusted and horrified; their beastly faces, with huge prognathous jaws and projecting canine teeth, he tried to describe by calling them a dog-headed people. Sir Henry Yule suggests that the mention of Cynocephali, or Dog-heads, in ancient writers may have had an analogous origin (*Marco Polo*, vol. ii. p. 252). This visit of the Venetian traveller to Andaman was one of very few real glimpses of savagery vouchsafed to Europeans before the fifteenth century; and a general review of the subject brings out in a strong light the truthfulness and authenticity of the description of American Indians in Eric the Red's Saga, as shown above, pp. 185–192.

they should have found it possible at once to sail eastward to the gulf of Aden. What if it should turn out after all that there was no connection between the Atlantic and Indian oceans? Every added league of voyaging toward the tropic of Capricorn must have been fraught with added discouragement, for it went to prove that, even if Ptolemy's theory was wrong, at any rate the ocean route to Asia was indefinitely longer than had been supposed. But was it possible to imagine any other route that should be more direct? To a trained mariner of original and imaginative mind, sojourning in Portugal and keenly watching the progress of African discovery, the years just following the voyage of Santarem and Escobar would be a period eminently fit for suggesting such a question. Let us not forget this date of 1471 while we follow Prince Henry's work to its first grand climax.

About the time that Diego Cam was visiting the tribes on the Congo, the negro king of Benin, a country by the mouth of the Niger, sent an embassy to John II. of Portugal (Prince Henry's nephew), with a request that missionary priests might be sent to Benin. It has been thought that the woolly-haired chieftain was really courting an alliance with the Portuguese, or perhaps he thought their "medicine men" might have the knack of confounding his foes. The negro envoy told King John that a thousand miles or so east of Benin there was an august sovereign who ruled over many subject peoples, and at whose court there was an order of chivalry whose badge or emblem was

a brazen cross. Such, at least, was the king's interpretation of the negro's words, and forthwith he jumped to the conclusion that this African potentate must be Prester John, whose name was redolent of all the marvels of the mysterious East. To find Prester John would be a long step toward golden Cathay and the isles of spice. So the king of Portugal rose to the occasion, and attacked the problem on both flanks at once. He sent Pedro de Covilham by way of Egypt to Aden, and he sent Bartholomew Dias, with three fifty-ton caravels, to make one more attempt to find an end to the Atlantic coast of Africa.

News of Prester John.

Covilham's journey was full of interesting experiences. He sailed from Aden to Hindustan, and on his return visited Abyssinia, where the semi-Christian king took such a liking to him that he would never let him go. So Covilham spent the rest of his life, more than thirty years, in Abyssinia, whence he was able now and then to send to Portugal items of information concerning eastern Africa that were afterwards quite serviceable in voyages upon the Indian ocean.[1]

Covilham's journey.

The daring captain, Bartholomew Dias, started in August, 1486, and after passing nearly four hundred miles beyond the tropic of Capricorn, was driven due south before heavy winds for thirteen days without seeing land. At the end of this stress of weather he turned his prows eastward, expecting soon to reach the coast. But as he had passed the southernmost point of Africa

[1] See Major's *India in the Fifteenth Century*, pp. lxxxv.–xc.

and no land appeared before him, after a while he steered northward and landed near the mouth of Gauritz river, more than two hundred miles east of the Cape of Good Hope. Thence he pushed on about four hundred miles farther eastward as far as the Great Fish river (about 33° 30′ S., 27° 10′ E.), where the coast begins to have a steady trend to the northeast. Dias was now fairly in the Indian ocean, and could look out with wistful triumph upon that waste of waters, but his worn-out crews refused to go any farther and he was compelled reluctantly to turn back. On the way homeward the ships passed in full sight of the famous headland which Dias called the Stormy Cape; but after arriving at Lisbon, in December, 1487, when the report of this noble voyage was laid before King John II., his majesty said, Nay, let it rather be called the Cape of Good Hope, since there was now much reason to believe that they had found the long-sought ocean route to the Indies.[1] Though this opinion turned out to be correct, it is well for us to remember that the proof was not yet com-

Bartholomew Dias passes the Cape of Good Hope and enters the Indian ocean.

[1] The greatest of Portuguese poets represents the Genius of the Cape as appearing to the storm-tossed mariners in cloud-like shape, like the Jinni that the fisherman of the Arabian tale released from a casket. He expresses indignation at their audacity in discovering his secret, hitherto hidden from mankind: —

Eu sou aquelle occulto e grande Cabo,
A quem chamais vós outros Tormentorio,
Que nunca á Ptolomeo, Pomponio, Estrabo,
Plinio, e quantos passaram, fui notorio:
Aqui toda a Africana costa acabo
Neste meu nunca vista promontorio,
Que para o polo Antarctico se estende,
A quem vossa ousadia tanto offende.

Camoens, *Os Lusiadas*, v. 50.

plete. No one could yet say with certainty that the African coast, if followed a few miles east of Great Fish river, would not again trend southward and run all the way to the pole. The completed proof was not obtained until Vasco da Gama crossed the Indian ocean ten years later.

This voyage of Bartholomew Dias was longer and in many respects more remarkable than any that is known to have been made before that time. From Lisbon back to Lisbon, reckoning the sinuosities of the coast, but making no allowance for tacking, the distance run by those tiny craft was not less than thirteen thousand miles.

Some effects of the discovery.

This voyage completed the overthrow of the fiery-zone doctrine, so far as Africa was concerned; it penetrated far into the southern temperate zone where Mela had placed his antipodal world; it dealt a staggering blow to the continental theory of Ptolemy; and its success made men's minds readier for yet more daring enterprises. Among the shipmates of Dias on this ever memorable voyage was a well-trained and enthusiastic Italian mariner, none other than Bartholomew, the younger brother of Christopher Columbus. There was true dramatic propriety in the presence of that man at just this time; for not only did all these later African voyages stand in a direct causal relation to the discovery of America, but as an immediate consequence of the doubling of the Cape of Good Hope we shall presently find Bartholomew Columbus in the very next year on his way to England, to enlist the aid of King Henry VII. in behalf of

Bartholomew Columbus.

a scheme of unprecedented boldness for which his elder brother had for some years been seeking to obtain the needful funds. Not long after that disappointing voyage of Santarem and Escobar in 1471, this original and imaginative sailor, Christopher Columbus, had conceived (or adopted and made his own) a new method of solving the problem of an ocean route to Cathay. We have now to sketch the early career of this epoch-making man, and to see how he came to be brought into close relations with the work of the Portuguese explorers.

CHAPTER V.

THE SEARCH FOR THE INDIES.

WESTWARD OR SPANISH ROUTE.

OUR information concerning the life of Columbus before 1492 is far from being as satisfactory as one could wish. Unquestionably he is to be deemed fortunate in having had for his biographers two such men as his friend Las Casas, one of the noblest characters and most faithful historians of that or any age, and his own son Ferdinand Columbus, a most accomplished scholar and bibliographer. The later years of Ferdinand's life were devoted, with loving care, to the preparation of a biography of his father; and his book — which unfortunately survives only in the Italian translation of Alfonso Ulloa,[1] published in Venice in 1571 — is of priceless value. As Washington Irving long ago wrote, it is "an invaluable document, entitled to great faith, and is the corner-

Sources of information concerning the life of Columbus: Las Casas and Ferdinand Columbus.

[1] *Historie del S. D. Fernando Colombo; Nelle quali s' ha particolare, & vera relatione della vita, & de' fatti dell' Ammiraglio D. Christoforo Colombo, suo padre: Et dello scoprimento, ch' egli fece dell' Indie Occidentali, dette Monde-Nvovo, hora possedute dal Sereniss. Re Catolico: Nuouamente di lingua Spagnuola tradotte nell' Italiana, dal S. Alfonso Vlloa. Con privilegio.* IN VENETIA, M D LXXI. *Appresso Francesco de' Franceschi Sanese.* The principal reprints are those of Milan, 1614; Venice, 1676 and 1678; London, 1867. I always cite it as *Vita dell' Ammiraglio.*

stone of the history of the American continent."[1] After Ferdinand's death, in 1539, his papers seem to have passed into the hands of Las Casas, who, from 1552 to 1561, in the seclusion of the college of San Gregorio at Valladolid, was engaged in writing his great "History of the Indies."[2] Ferdinand's superb library, one of the finest in Europe, was bequeathed to the cathedral at Seville.[3] It contained some twenty thousand volumes in print and manuscript, four fifths of which, through shameful neglect or vandalism, have perished or been scattered. Four thousand volumes, however, are still preserved, and this library (known as the "Biblioteca Colombina") is full of interest for the historian. Book-buying was to Ferdinand Columbus one of the most important occupations in life. His books were not only carefully numbered, but on the last leaf of each one he wrote a memorandum of the time and place of its purchase and the sum of money paid for it.[4] This habit of Ferdinand's has fur-

The Biblioteca Colombina at Seville.

[1] Irving's *Life of Columbus*, New York, 1868, vol. iii. p. 375. My references, unless otherwise specified, are to this, the "Geoffrey Crayon," edition.

[2] Las Casas, *Historia de las Indias, ahora por primera vez dada á luz por el Marqués de la Fuensanta del Valle y D. José Sancho Rayon*, Madrid, 1875, 5 vols. 8vo.

[3] "Fu questo D. Ernando di non minor valore del padre, ma di molte più lettere et scienze dotato che quelle non fu; et il quale lasciò alla Chiesa maggiore di Siviglia, dove hoggi si vede honorevolmente sepolto, una, non sola numerosissima, ma richissima libraria, et piena di molti libri in ogni facoltà et scienza rarissimi: laquale da coloro che l' han veduta, vien stimata delle più rare cose di tutta Europa." Moleto's prefatory letter to *Vita dell' Ammiraglio*, April 25, 1571.

[4] For example, "*Manuel de la Sancta Fe católica*, Sevilla, 1495,

nished us with clues to the solution of some interesting questions. Besides this, he was much given to making marginal notes and comments, which are sometimes of immense value, and, more than all, there are still to be seen in this library a few books that belonged to Christopher Columbus himself, with very important notes in his own handwriting and in that of his brother Bartholomew. Las Casas was familiar with this grand collection in the days of its completeness, he was well acquainted with all the members of the Columbus family, and he had evidently read the manuscript sources of Ferdinand's book; for a comparison with Ulloa's version shows that considerable portions of the original Spanish text — or of the documents upon which it rested — are preserved in the work of Las Casas.[1] The citation and adoption of Ferdinand's statements by the latter writer, who was able independently to verify them, is therefore in most cases equivalent to corroboration, and the two writers together form an authority of the weightiest kind, and not lightly to be questioned or set aside.

in-4. Costó en Toledo 34 maravedis, año 1511, 9 de Octubre, No. 3004." "*Tragicomedia de Calisto y Melibea*, Sevilla, 1502, in-4. Muchas figuras. Costó en Roma 25 cuatrines, por Junio de 1515. No. 2417," etc. See Harrisse, *Fernand Colomb*, Paris, 1872, p. 13.

[1] "L' autorita di Las Casas è d' una suprema e vitale importanza tanto nella storia di Cristoforo Colombo, come nell' esame delle *Historie* di Fernando suo figlio. . . . E dal confronto tra questi due scrittori emergerà una omogeneità sì perfetta, che si potrebbe coi termini del frate domenicano ritrovare o rifare per due terzi il testo originale spagnuolo delle *Historie* di Fernando Colombo." Peragallo, *L' autenticità delle Historie di Fernando Colombo*, Genoa, 1884, p. 23.

Besides these books of most fundamental importance, we have valuable accounts of some parts of the life of Columbus by his friend Andres Bernaldez, the curate of Los Palacios near Seville.[1] Peter Martyr, of Anghiera, by Lago Maggiore, was an intimate friend of Columbus, and gives a good account of his voyages, besides mentioning him in sundry epistles.[2] Columbus himself, moreover, was such a voluminous writer that his contemporaries laughed about it. "God grant," says Zuñiga in a letter to the Marquis de Pescara, "God grant that Gutierrez may never come short for paper, for he writes more than Ptolemy, more than Columbus, the man who discovered the Indies."[3] These writings are in great part lost, though doubtless a good many things will yet be brought to light in Spain by persistent rummaging. We have, however, from sixty to seventy letters and reports by Columbus, of which twenty-three at least are in his own handwriting; and all these have been published.[4]

Bernaldez and Peter Martyr.

Letters of Columbus.

Nevertheless, while these contemporary mate-

[1] *Historia de los Reyes Católicos D. Fernando y Dª Isabel. Crónica inédita del siglo XV, escrita por el Bachiller Andrés Bernaldez, cura que fué de Los Palacios*, Granada, 1856, 2 vols. small 4to. It is a book of very high authority.

[2] *De orbe novo Decades*, Alcalá, 1516; *Opus epistolarum*, Compluti (Alcalá), 1530; Harrisse, *Bibliotheca Americana Vetustissima*, Nos. 88, 160.

[3] "A Gutierrez vuestro solicitador, ruego à Dios que nunca le falte papel, porque escribe mas que Tolomeo y que Colon, el que halló las Indias." Rivadeneyra, *Curiosidades bibliográficas*, p. 59, apud Harrisse, *Christophe Colomb*, tom. i. p. 1.

[4] Harrisse, *loc. cit.*, in 1884, gives the number at sixty-four.

rials give us abundant information concerning the great discoverer, from the year 1492 until his death, it is quite otherwise with his earlier years, especially before his arrival in Spain in 1484. His own allusions to these earlier years are sometimes hard to interpret;[1] and as for his son Ferdinand, that writer confesses, with characteristic and winning frankness, that his information is imperfect, inasmuch as filial respect had deterred him from closely interrogating his father on such points, or, to tell the plain truth, being still very young when his father died, he had not then come to recognize their importance.[2] This does not seem strange when we reflect that Ferdinand must have seen very little of his father until in 1502, at the age of fourteen, he accompanied him on that last difficult and disastrous voyage, in which the sick and harassed old man could have had but little time or strength for aught but the work in hand. It is not strange that when, a quarter of a century later, the son set about his literary task, he should now and then have got a date wrong, or have narrated some inci-

Defects in Ferdinand's information.

[1] Sometimes from a slip of memory or carelessness of phrasing, on Columbus's part, sometimes from our lacking the clue, sometimes from an error in numerals, common enough at all times.

[2] "Ora, l' Ammiraglio avendo cognizione delle dette scienze, cominciò ad attendere al mare, e a fare alcuni viaggi in levante e in ponente; de' quali, e di molte altre cose di quei primi dì io non ho piena notizia; perciocchè egli venne a morte a tempo che io non aveva tanto ardire, o pratica, per la riverenza filiale, che io ardissi di richiederlo di cotali cose; o, per parlare più veramente, allora mi ritrovava io, come giovane, molto lontano da cotal pensiero." *Vita dell' Ammiraglio*, cap. iv.

dents in a confused manner, or have admitted some gossipping stories, the falsehood of which can now plainly be detected. Such blemishes, which occur chiefly in the earlier part of Ferdinand's book, do not essentially detract from its high authority.[1] The limits which bounded the son's

[1] Twenty years ago M. Harrisse published in Spanish and French a critical essay maintaining that the *Vita dell' Ammiraglio* was not written by Ferdinand Columbus, but probably by the famous scholar Perez de Oliva, professor in the university of Salamanca, who died in 1530 (*D. Fernando Colon, historiador de su padre*, Seville, 1871; *Fernand Colomb: sa vie, ses œuvres*, Paris, 1872). The Spanish manuscript of the book had quite a career. As already observed, it is clear that Las Casas used it, probably between 1552 and 1561. From Ferdinand's nephew, Luis Columbus, it seems to have passed in 1568 into the hands of Baliano di Fornari, a prominent citizen of Genoa, who sent it to Venice with the intention of having it edited and published with Latin and Italian versions. All that ever appeared, however, was the Italian version made by Ulloa and published in 1571. Harrisse supposes that the Spanish manuscript, written by Oliva, was taken to Genoa by some adventurer and palmed off upon Baliano di Fornari as the work of Ferdinand Columbus. But inasmuch as Harrisse also supposes that Oliva probably wrote the book (about 1525) at Seville, under Ferdinand's eyes and with documents furnished by him, it becomes a question, in such case, how far was Oliva anything more than an amanuensis to Ferdinand? and there seems really to be precious little wool after so much loud crying. If the manuscript was actually written "sous les yeux de Fernand et avec documents fournis par lui," most of the arguments alleged to prove that it could not have emanated from the son of Columbus fall to the ground. It becomes simply a question whether Ulloa may have here and there tampered with the text, or made additions of his own. To some extent he seems to have done so, but wherever the Italian version is corroborated by the Spanish extracts in Las Casas, we are on solid ground, for Las Casas died five years before the Italian version was published. M. Harrisse does not seem as yet to have convinced many scholars. His arguments have been justly, if somewhat severely, characterized by my old friend, the lamented Henry Stevens (*Historical Collections*,

accurate knowledge seem also to have bounded that of such friends as Bernaldez, who did not become acquainted with Columbus until after his arrival in Spain.

Researches of Henry Harrisse.

In recent years elaborate researches have been made, by Henry Harrisse and others, in the archives of Genoa, Savona, Seville, and other places with which Columbus was connected, in the hope of supplementing this imperfect information concerning his earlier years.[1] A number of data have thus been obtained, which, while clearing up the subject most remarkably in some directions, have been made to mystify and embroil it in others. There is scarcely a date or a fact relating to Columbus before 1492 but has been made the subject of hot dispute; and some pretty wholesale reconstructions of his biography have been attempted.[2] The general impression, however, which the discussions of the past twenty years have left upon my mind, is that the more violent hypotheses are not likely

London, 1881, vol. i. No. 1379), and have been elaborately refuted by M. d'Avezac, *Le livre de Ferdinand Colomb: revue critique des allegations proposées contre son authenticité*, Paris, 1873; and by Prospero Peragallo, *L' autenticità delle Historie di Fernando Colombo*, Genoa, 1884. See also Fabié, *Vida de Fray Bartolomé de Las Casas*, Madrid, 1869, tom. i. pp. 360–372.

[1] See Harrisse, *Christophe Colomb*, Paris, 1884, 2 vols., a work of immense research, absolutely indispensable to every student of the subject, though here and there somewhat over-ingenious and hypercritical, and in general unduly biased by the author's private crotchet about the work of Ferdinand.

[2] One of the most radical of these reconstructions may be found in the essay by M. d'Avezac, "Canevas chronologique de la vie de Christophe Colomb," in *Bulletin de la Société de Géographie*, Paris, 1872, 6e série, tom. iv. pp. 5–59.

to be sustained, and that the newly-ascertained facts do not call for any very radical interference with the traditional lines upon which the life of Columbus has heretofore been written.[1] At any rate there seems to be no likelihood of such interference as to modify our views of the causal sequence of events that led to the westward search for the Indies; and it is this relation of cause and effect that chiefly concerns us in a history of the Discovery of America.

The date of the birth of Columbus is easy to determine approximately, but hard to determine with precision. In the voluminous discussion upon this subject the extreme limits assigned have been 1430 and 1456, but neither of these extremes is admissible, and our choice really lies somewhere between 1436 and 1446. Among the town archives of Savona is a deed of sale executed August 7, 1473, by the father of Christopher Columbus, and ratified by Christopher and his next brother Giovanni.[2] Both brothers must then have attained

Date of the birth of Columbus: archives of Savona.

[1] Washington Irving's *Life of Columbus*, says Harrisse, "is a history written with judgment and impartiality, which leaves far behind it all descriptions of the discovery of the New World published before or since." *Christophe Colomb*, tom. i. p. 136. Irving was the first to make use of the superb work of Navarrete, *Coleccion de los viages y descubrimientos que hicieron por mar los Españoles desde fines del siglo XV.*, Madrid, 1825–37, 5 vols. 4to. Next followed Alexander von Humboldt, with his *Examen critique de l'histoire de la géographie de Nouveau Continent*, Paris, 1836–39, 5 vols. 8vo. This monument of gigantic erudition (which, unfortunately, was never completed) will always remain indispensable to the historian.

[2] Harrisse, *op. cit.* tom. i p. 196.

their majority, which in the republic of Genoa was fixed at the age of twenty-five. Christopher, therefore, can hardly have been less than seven and twenty, so that the latest probable date for his birth is 1446, and this is the date accepted by Muñoz, Major, Harrisse, and Avezac. There is no documentary proof, however, to prevent our taking an earlier date; and the curate of Los Palacios — strong authority on such a point — says expressly that at the time of his death, in 1506, Columbus was "in a good old age, seventy years a little more or less."[1] Upon this statement Navarrete and Humboldt have accepted 1436 as the probable date of birth.[2] The most plausible objection to this is a statement made by Columbus himself in a letter to Ferdinand and Isabella, written in 1501. In this letter, as first given in the biography by his son, Columbus says that he was of "very tender age" when he began to sail the seas, an occupation which he has kept up until the present moment; and in the next sentence but one he adds that "now for forty years I have been

Statement of Bernaldez.

[1] "In *senectute bona*, de edad de setenta años poco mas o menos." Bernaldez, *Reyes Católicos*, tom. i. p. 334.

[2] M. d'Avezac (*Canevas chronologique*, etc) objects to this date that we have positive documentary evidence of the birth of Christopher's youngest brother Giacomo (afterwards spanished into Diego) in 1468, which makes an interval of 32 years; so that if the mother were (say) 18 in 1436 she must have borne a child at the age of 50. That would be unusual, but not unprecedented. But M. Harrisse (tom. ii. p. 214), from a more thorough sifting of this documentary evidence, seems to have proved that while Giacomo cannot have been born later than 1468 he may have been born as early as 1460; so that whatever is left of M. d'Avezac's objection falls to the ground.

in this business and have gone to every place where there is any navigation up to the present time." [1] The expression "very tender age" agrees with Ferdinand's statement that his father was fourteen years old when he first took to the sea.[2] Since 1446 + 14 + 40 = 1500, it is argued that Columbus was probably born about 1446; some sticklers for extreme precision say 1447. But now there were eight years spent by Columbus in Spain, from 1484 to 1492, without any voyages at all; they were years, as he forcibly says, "dragged out in disputations." [3] Did he mean to include those eight years in his forty spent upon the sea? Navarrete thinks he did not. When he wrote under excitement, as in this letter, his language was apt to be loose, and it is fair to construe it according to the general probabilities of the case. This addition of eight years brings his statement substantially into harmony with that of Bernaldez, which it really will not do to set aside lightly. Moreover, in the original text of the letter, since published by Navarrete, Columbus appears to say, "now for *more than* forty years," so that the agreement with Bernaldez becomes practically complete.[4] The good curate

Columbus's letter of September, 1501.

[1] "Serenissimi principi, di età molto tenera io entrai in mare navigando, et vi ho continovato fin' hoggi: . . . et hoggimai passano quaranta anni che io uso per tutte quelle parti che fin hogg. si navigano." *Vita dell' Ammiraglio*, cap. iv.

[2] *Op. cit.* cap. iv. *ad fin.*

[3] "Traido en disputas," Navarrete, *Coleccion*, tom. ii. p. 254.

[4] "Muy altos Reyes, de muy pequeña edad entré en la mar navegando, é lo he continuado fasta hoy. . . . Yá pasan de cuarenta años que yo voy en este uso: todo lo que hoy se navega, todo lo he andado." Navarrete, *Coleccion*, tom. ii. p. 262. Ob-

spoke from direct personal acquaintance, and his phrases "seventy years" and "a good old age" are borne out by the royal decree of February 23, 1505, permitting Columbus to ride on a mule, instead of a horse, by reason of his old age (*ancianidad*) and infirmities.[1] Such a phrase applies much better to a man of sixty-nine than to a man of fifty-nine. On the whole, I think that Washington Irving showed

The balance of probability is in favour of 1436.

serve the lame phrase "pasan de cuarenta;" what business has that "de" in such a place without "mas" before it? "Pasan mas de cuarenta," i. e. "more than forty;" writing in haste and excitement, Columbus left out a little word; or shall we blame the proof-reader? Avezac himself translates it "il y a plus de quarante ans," and so does Eugène Müller, in his French version of Ferdinand's book, *Histoire de la vie de Christophe Colomb*, Paris, 1879, p. 15.

[1] That was the golden age of sumptuary laws. Because Alfonso XI. of Castile (1312–1350), when he tried to impress horses for the army, found it hard to get as many as he wanted, he took it into his head that his subjects were raising too many mules and not enough horses. So he tried to remedy the evil by a wholesale decree prohibiting all Castilians from riding upon mules! In practice this precious decree, like other villainous prohibitory laws that try to prevent honest people from doing what they have a perfect right to do, proved so vexatious and ineffective withal that it had to be perpetually fussed with and tinkered. One year you could ride a mule and the next year you could n't. In 1492, as we shall see, Columbus immortalized one of these patient beasts by riding it a few miles from Granada. But in 1494 Ferdinand and Isabella decreed that nobody except women, children, and clergymen could ride on mules, — "dont la marche est beaucoup plus douce que celle des chevaux" (Humboldt, *Examen critique*, tom. iii. p. 338). This edict remained in force in 1505, so that the Discoverer of the New World, the inaugurator of the greatest historic event since the birth of Christ, could not choose an easy-going animal for the comfort of his weary old weather-shaken bones without the bother of getting a special edict to fit his case. *Eheu, quam parva sapientia regitur mundus!*

good sense in accepting the statement of the curate of Los Palacios as decisive, dating as it does the birth of Columbus at 1436, "a little more or less."

With regard to the place where the great discoverer was born there ought to be no dispute, since we have his own most explicit and unmistakable word for it, as I shall presently show. Nevertheless there has been no end of dispute. He has been claimed by as many places as Homer,[1] but the only real question is whether he was born in the city of Genoa or in some neighbouring village within the boundaries of the Genoese republic. It is easy to understand how doubt has arisen on this point, if we trace the changes of residence of his family. The grandfather of Columbus seems to have been Giovanni Colombo, of Terrarossa, an inland hamlet some twenty miles east by north from

[1] "Nous avons démontré l'inanité des théories qui le font naître à Pradello, à Cuccaro, à Cogoleto, à Savona, à Nervi, à Albissola, à Bogliasco, à Cosseria, à Finale, à Oneglia, voire même en Angleterre ou dans l'isle de Corse." Harrisse, tom. i. p. 217. In Cogoleto, about sixteen miles west of Genoa on the Corniche road, the visitor is shown a house where Columbus is said first to have seen the light. Upon its front is a quaint inscription in which the discoverer is compared to the dove (*Colomba*) which, when sent by Noah from the ark, discovered dry land amid the the waters: —

Con generoso ardir dall' Arca all' onde
Ubbidiente il vol Colomba prende,
Corre, s' aggira, terren scopre, e fronde
D' olivo in segno, al gran Noè ne rende.
L' imita in ciò Colombo, ne' s' asconde,
E da sua patria il mar solcando fende;
Terreno al fin scoprendo diede fondo,
Offerendo all' Ispano un Nuovo Mondo.

This house is or has been mentioned in Baedeker's *Northern Italy* as the probable birthplace, along with Peschel's absurd date 1456. It is pretty certain that Columbus was *not* born in that house or in Cogoleto. See Harrisse, tom. i. pp. 148–155.

Genoa. Giovanni's son, Domenico Colombo, was probably born at Terrarossa, and moved thence with his father, somewhere between 1430 and 1445, to Quinto al Mare, four miles east of Genoa on the coast. All the family seem to have been weavers. Before 1445, but how many years before is not known, Domenico married Susanna Fontanarossa, who belonged to a family of weavers, probably of Quezzi, four miles northeast of Genoa. Between 1448 and 1451 Domenico, with his wife and three children, moved into the city of Genoa, where he became the owner of a house and was duly qualified as a citizen. In 1471 Domenico moved to Savona, thirty miles west on the Corniche road, where he set up a weaving establishment and also kept a tavern. He had then five children, Cristoforo, Giovanni, Bartolommeo, Giacomo, and a daughter. Domenico lived in Savona till 1484. At that time his wife and his son Giovanni were dead, Giacomo was an apprentice, learning the weaver's trade, Christopher and Bartholomew had long been domiciled in Portugal, the daughter had married a cheese merchant in Genoa, and to that city Domenico returned in the autumn of 1484, and lived there until his death, at a great age, in 1499 or 1500. He was always in pecuniary difficulties, and died poor and in debt, though his sons seem to have sent him from Portugal and Spain such money as they could spare.[1]

The family of Domenico Colombo, and its changes of residence.

The reader will observe that Christopher and his two next brothers were born before the family

[1] Harrisse, tom. i. pp. 166–216.

went to live in the city of Genoa. It has hence been plausibly inferred that they were born either in Quinto or in Terrarossa; more likely the latter, since both Christopher and Bartholomew, as well as their father, were called, and sometimes signed themselves, Columbus of Terrarossa.[1] In this opinion the most indefatigable modern investigator, Harrisse, agrees with Las Casas.[2] Nevertheless, in a solemn legal instrument executed February 22, 1498, establishing a *mayorazgo*, or right of succession to his estates and emoluments in the Indies, Columbus expressly declares that he was born in the city of Genoa: "I enjoin it upon my son, the said Don Diego, or whoever may inherit the said *mayorazgo*, always to keep and maintain in the City of Genoa one person of our lineage, because from thence I came and in it I was born."[3] I do not see how such a definite and positive statement, occurring in such a document, can be doubted or explained away. It seems clear that the son was born while the parents were dwelling either at

Christopher tells us that he was born in the city of Genoa.

[1] Harrisse, tom. i. p. 188; *Vita dell' Ammiraglio*, cap. xi.

[2] "Fué este varon escogido de nacion genovés, de algun lugar de la provincia de Génova; cual fuese, donde nació ó qué nombre tuvo el tal lugar, no consta la verdad dello más de que se solia llamar ántes que llegase al estado que llegó, Cristobal Colombo de Terra-rubia y lo mismo su hermano Bartolomé Colon." Las Casas, *Historia de las Indias*, tom. i. p. 42; cf. Harrisse, tom. i. pp. 217–222.

[3] "Mando al dicho D. Diego, mi hijo, ó á la persona que heredare el dicho mayorazgo, que tenga y sostenga siempre en la *Ciudad de Génova* una persona de nuestro linage . . . pues que della salí *y en ella nací*" [italics mine]. Navarrete, *Coleccion*, tom. ii. p 232.

Terrarossa or at Quinto, but what is to hinder our supposing that the event might have happened when the mother was in the city on some errand or visit? The fact that Christopher and his brother were often styled "of Terrarossa" does not prove that they were born in that hamlet. A family moving thence to Quinto and to Genoa would stand in much need of some such distinctive epithet, because the name Colombo was extremely common in that part of Italy; insomuch that the modern historian, who prowls among the archives of those towns, must have a care lest he get hold of the wrong person, and thus open a fresh and prolific source of confusion. This has happened more than once.

On the whole, then, it seems most probable that the Discoverer of America was born in the city of Genoa in 1436, or not much later. Of his childhood we know next to nothing. Las Casas tells us that he studied at the University of Pavia and acquired a good knowledge of Latin.[1] This has been doubted, as incompatible with the statement of Columbus that he began a seafaring life at the age of fourteen. It is clear, however, that the earlier years of Columbus, before his departure for Portugal, were not all spent in seafaring. Somewhere, if not at Pavia, he not only learned Latin, but found time to study geography, with a little astronomy and mathematics, and to become an expert draughtsman. He seems to have gone to and fro upon the Mediterranean in merchant voyages, now and then

Christopher's early years.

[1] Las Casas, *Historia*, tom. i. p. 46.

taking a hand in sharp scrimmages with Mussulman pirates.[1] In the intervals of this adventurous life he was probably to be found in Genoa, earning his bread by making maps and charts, for which there was a great and growing demand. About 1470, having become noted for his skill in such work, he followed his younger brother Bartholomew to Lisbon,[2] whither Prince Henry's

[1] The reader must beware, however, of some of the stories of adventure attaching to this part of his life, even where they are confirmed by Las Casas. They evidently rest upon hearsay, and the incidents are so confused that it is almost impossible to extract the kernel of truth.

[2] The date 1470 rests upon a letter of Columbus to King Ferdinand of Aragon in May, 1505. He says that God must have directed him into the service of Spain by a kind of miracle, since he had already been in Portugal, whose king was more interested than any other sovereign in making discoveries, and yet God closed his eyes, his ears, and all his senses to such a degree that *in fourteen years* Columbus could not prevail upon him to lend aid to his scheme. "Dije milagrosamente porque fui á aportar á Portugal, adonde el Rey de allí entendia en el descubrir mas que otro: él le atajó la vista, oido y todos los sentidos, que en catorce años no le pude hacer entender lo que yo dije." Las Casas, *op. cit.* tom. iii. p. 187; Navarrete, tom. iii. p. 528. Now it is known that Columbus finally left Portugal late in 1484, or very early in 1485, so that fourteen years would carry us back to before 1471 for the first arrival of Columbus in that country. M. Harrisse (*op. cit.* tom. i. p. 263) is unnecessarily troubled by the fact that the same person was not king of Portugal during the whole of that period. Alfonso V. (brother of Henry the Navigator) died in 1481, and was succeeded by his son John II.; but during a considerable part of the time between 1475 and 1481 the royal authority was exercised by the latter. Both kings were more interested in making discoveries than any other European sovereigns. Which king did Columbus mean? Obviously his words were used loosely; he was too much preoccupied to be careful about trifles; he probably had John in his mind, and did not bother himself about Alfonso; King Ferdinand, to whom he was writing, did not need to have such points minutely specified, and

undertakings had attracted able navigators and learned geographers until that city had come to be the chief centre of nautical science in Europe.

could understand an elliptical statement; and the fact stated by Columbus was simply that during a residence of fourteen years in Portugal he had not been able to enlist even that enterprising government in behalf of his novel scheme.

In the town archives of Savona we find Christopher Columbus witnessing a document March 20, 1472, endorsing a kind of promissory note for his father August 26, 1472, and joining with his mother and his next brother Giovanni, August 7, 1473, in relinquishing all claims to the house in Genoa sold by his father Domenico by deed of that date. It will be remembered that Domenico had moved from Genoa to Savona in 1471. From these documents (which are all printed in his *Christophe Colomb*, tom. ii. pp. 419, 420, 424–426) M. Harrisse concludes that Christopher cannot have gone to Portugal until after August 7, 1473. Probably not, so far as to be domiciled there; but inasmuch as he had long been a sailor, why should he not have been in Portugal, or upon the African coast in a Portuguese ship, in 1470 and 1471, and nevertheless have been with his parents in Savona in 1472 and part of 1473? His own statement "fourteen years" is not to be set aside on such slight grounds as this. Furthermore, from the fact that Bartholomew's name is not signed to the deed of August 7, 1473, M. Harrisse infers that he was then a minor; i. e. under five and twenty. But it seems to me more likely that Bartholomew was already domiciled at Lisbon, since we are expressly told by two good contemporary authorities — both of them Genoese writers withal — that he moved to Lisbon and began making maps there at an earlier date than Christopher. See Antonio Gallo, *De navigatione Columbi per inaccessum antea Oceanum Commentariolus*, apud Muratori, tom. xxiii. col. 301–304; Giustiniani, *Psalterium*, Milan, 1516 (annotation to Psalm xix.); Harrisse, *Bibliotheca Americana Vetustissima*, No. 88. To these statements M. Harrisse objects that he finds (in Belloro, *Notizie*, p. 8) mention of a document dated Savona, June 16, 1480, in which Domenico Colombo gives a power of attorney to his son Bartholomew to act for him in some matter. The document itself, however, is not forthcoming, and the notice cited by M. Harrisse really affords no ground for the assumption that Bartholomew was in 1480 domiciled at Savona or at Genoa.

Christopher and Bartholomew at Lisbon.

Las Casas assures us that Bartholomew was quite equal to Christopher as a sailor, and surpassed him in the art of making maps and globes, as well as in the beauty of his handwriting.[1] In Portugal, as before in Italy, the work of the brothers Columbus was an alternation of map-making on land and adventure on the sea. We have Christopher's own word for it that he sailed with more than one of those Portuguese expeditions down the African coast;[2] and I think it not altogether unlikely that he may have been with Santarem and Escobar in their famous voyage of 1471.

Philippa Moñiz de Perestrelo.

He had not been long in Portugal before he found a wife. We have already met the able Italian navigator, Bartholomew Perestrelo, who was sent by Prince Henry to the island of Porto Santo with Zarco and Vaz, about 1425. In recognition of eminent services Prince Henry afterwards, in 1446, appointed him governor of Porto Santo. Perestrelo died in 1457, leaving a widow (his second wife, Isabella Moñiz) and a charming daughter Philippa,[3]

[1] Las Casas, *op. cit.* tom. i. p. 224; tom. ii. p. 80. He possessed many maps and documents by both the brothers.

[2] "Spesse volte navigando da Lisbona a Guinea," etc. *Vita dell' Ammiraglio*, cap. iv. The original authority is Columbus's marginal note in his copy of the *Imago Mundi* of Alliacus, now preserved in the Colombina at Seville: "Nota quod sepius navigando ex Ulixbona ad austrum in Guineam, notavi cum diligentia viam, etc. Compare the allusions to Guinea in his letters, Navarrete, *Coleccion*, tom. i. pp. 55, 71, 101.

[3] There are some vexed questions concerning this lady and the connections between the Moñiz and Perestrelo families, for which see Harrisse, tom. i. pp. 267–292.

whom Columbus is said to have first met at a religious service in the chapel of the convent of All Saints at Lisbon. From the accounts of his personal appearance, given by Las Casas and others who knew him, we can well understand how Columbus should have won the heart of this lady, so far above him at that time in social position. He was a man of noble and commanding presence, tall and powerfully built, with fair ruddy complexion and keen blue-gray eyes that easily kindled; while his waving white hair must have been quite picturesque. His manner was at once courteous and cordial and his conversation charming, so that strangers were quickly won, and in friends who knew him well he inspired strong affection and respect.[1] There was an indefinable air of authority about him, as befitted a man of great heart and lofty thoughts.[2] Out of those kindling eyes looked a grand and poetic soul, touched with that divine spark of religious enthusiasm which makes true genius.

Personal appearance of Columbus.

The acquaintance between Columbus and Philippa Moñiz de Perestrelo was not long in ripening into affection, for they were married in 1473. As there was a small estate at Porto Santo, Columbus went home thither with his bride to live for a while in quiet and seclusion. Such repose we may believe to have been

His marriage, and life upon the island of Porto Santo.

[1] Las Casas, *Historia*, tom. i. p. 43. He describes Bartholomew as not unlike his brother, but not so tall, less affable in manner, and more stern in disposition, *id.* tom. ii. p. 80.

[2] "Christoval Colon . . . persona de gran corazon y altos pensamientos." Mariana, *Historia de España*, tom. viii. p. 341.

favourable to meditation, and on that little island, three hundred miles out on the mysterious ocean, we are told that the great scheme of sailing westward to the Indies first took shape in the mind of Columbus.[1] His father-in-law Perestrelo had left a quantity of sailing charts and nautical notes, and these Columbus diligently studied, while ships on their way to and from Guinea every now and then stopped at the island, and one can easily imagine the eager discussions that must have been held over the great commercial problem of the age, — how far south that African coast extended and whether there was any likelihood of ever finding an end to it.

How long Columbus lived upon Porto Santo is not known, but he seems to have gone from time to time back to Lisbon, and at length to have made his home — or in the case of such a rover we might better say his headquarters — in that city. We come now to a document of supreme importance for our narrative. Paolo del Pozzo dei Toscanelli, born at Florence in 1397, was one of the most famous astronomers and cosmographers of his time, a man to whom it was natural that questions involving the size and shape of the earth

[1] Upon that island his eldest son Diego was born. This whole story of the life upon Porto Santo and its relation to the genesis of Columbus's scheme is told very explicitly by Las Casas, who says that it was told to him by Diego Columbus at Barcelona in 1519, when they were waiting upon Charles V., just elected Emperor and about to start for Aachen to be crowned. And yet there are modern critics who are disposed to deny the whole story. (See Harrisse, tom. i. p. 298.) The grounds for doubt are, however, extremely trivial when confronted with Las Casas, *Historia*, tom. i. p. 54.

should be referred. To him Alfonso V. of Portugal made application, through a gentleman of the royal household, Fernando Martinez, who happened to be an old friend of Toscanelli. What Alfonso wanted to know was whether there could be a shorter oceanic route to the Indies than that which his captains were seeking by following the African coast; if so, he begged that Toscanelli would explain the nature and direction of such a route. The Florentine astronomer replied with the letter presently to be quoted in full, dated June 25, 1474; and along with the letter he sent to the king a sailing chart, exhibiting his conception of the Atlantic ocean, with Europe on the east and Cathay on the west. The date of this letter is eloquent. It was early in 1472 that Santarem and Escobar brought back to Lisbon the news that beyond the Gold Coast the African shore turned southwards and stretched away in that direction beyond the equator. As I have already observed, this was the moment when the question as to the possibility of a shorter route was likely to arise;[1] and this is precisely the question we find the king of Portugal putting to Toscanelli some time before the middle of 1474. Now about this same time, or not long afterwards, we find Columbus himself appealing to Toscanelli. An aged Florentine merchant, Lorenzo Giraldi, then settled in Lisbon, was going back to his native city for a visit, and to him Columbus entrusted a letter for the eminent astronomer. He received the following answer:

Alfonso V. asks advice of the great astronomer Toscanelli.

[1] See above, p. 330.

"Paul, the physicist, to Christopher Columbus greeting.[1] I perceive your great and noble desire to go to the place where the spices grow; wherefore in reply to a letter of yours, I send you a copy of another letter, which I wrote a few days ago [or some time ago] to a friend of mine, a gentleman of the household of the most gracious king of Portugal before the wars of Castile,[2] in reply to another, which by command of His Highness he wrote me concerning that matter: and I send you another sailing chart, similar to the one I sent him, by which your demands will be satisfied. The copy of that letter of mine is as follows: —

Toscanelli's first letter to Columbus.

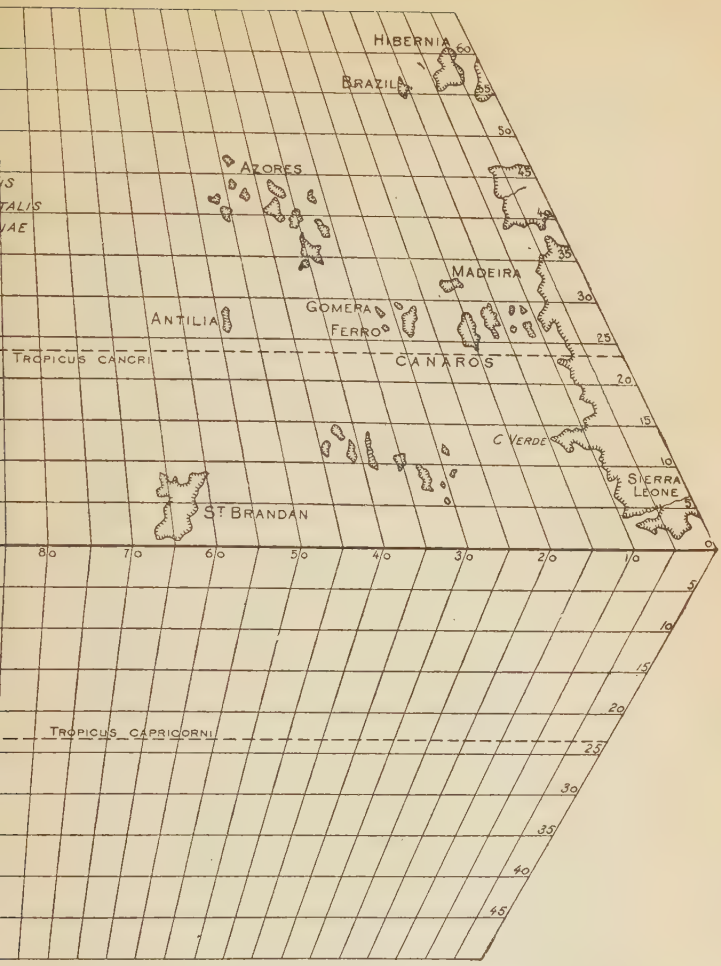
"'Paul, the physicist, to Fernando Martinez, canon, at Lisbon, greeting.[3] I was glad to hear

[1] I translate this prologue from the Italian text of the *Vita dell' Ammiraglio*, cap. viii. The original Latin has nowhere been found. A Spanish version of the whole may be found in Las Casas, *Historia*, tom. i. pp. 92–96. Las Casas, by a mere slip of the pen, calls "Paul, the physicist," *Marco Paulo*, and fifty years later Mariana calls him *Marco Polo, physician:* "por aviso que le dió un cierto Marco Polo médico Florentin," etc. *Historia de España*, tom. viii. p. 343. Thus step by step doth error grow.

[2] He means that his friend Martinez has been a member of King Alfonso's household ever since the time before the civil wars that began with the attempted deposition of Henry IV. in 1465 and can hardly be said to have come to an end before the death of that prince in December, 1474. See Humboldt, *Examen critique*, tom. i. p. 225.

[3] I translate this enclosed letter from the original Latin text, as found, a few years ago, in the handwriting of Columbus upon the fly-leaves of his copy of the *Historia rerum ubique gestarum* of Æneas Sylvius Piccolomini (Pope Pius II.), published at Venice in 1477, in folio, and now preserved in the Colombina at Seville. This Latin text is given by Harrisse, in his *Fernand Colomb*, pp. 178–180, and also (with more strict regard to the

SKETCH OF TOSCANELLI'S MAP, SENT TO PORTUGAL IN 147



BY COLUMBUS IN HIS FIRST VOYAGE ACROSS THE ATLANTIC

of your intimacy and favour with your most noble and illustrious king. I have formerly spoken with you about a shorter route to the places of Spices by ocean navigation than that which you are pursuing by Guinea. The most gracious king now desires from me some statement, or rather an exhibition to the eye, so that even slightly educated persons can grasp and comprehend that route. Although I am well aware that this can be proved from the spherical shape of the earth, nevertheless, in order to make the point clearer and to facilitate the enterprise, I have decided to exhibit that route by means of a sailing chart. I therefore send to his majesty a chart made by my own hands,[1] upon which are laid down your coasts, and

Toscanelli's copy of his former letter to Martinez — enclosed in his first letter to Columbus.

abbreviations of the original) in his *Bibliotheca Americana Vetustissima — Additions*, Paris, 1872, pp. xvi.–xviii. Very likely Columbus had occasion to let the original MS. go out of his hands, and so preserved a copy of it upon the fly-leaves of one of his books. These same fly-leaves contain extracts from Josephus and Saint Augustine. The reader will rightly infer from my translation that the astronomer's Latin was somewhat rugged and lacking in literary grace. Apparently he was anxious to jot down quickly what he had to say, and get back to his work.

[1] A sketch of this most memorable of maps is given opposite. Columbus carried it with him upon his first voyage, and shaped his course in accordance with it Las Casas afterwards had it in his possession (*Hist. de las Indias*, tom. i. pp. 96, 279). It has since been lost, that is to say, it may still be in existence, but nobody knows where. But it has been so well described that the work of restoring its general outlines is not difficult and has several times been done. The sketch here given is taken from Winsor (*Narr. and Crit. Hist.*, ii. 103), who takes it from *Das Ausland*, 1867, p. 5. Another restoration may be found in St. Martin's *Atlas*, pl. ix. This map was the source of the western part of Martin Behaim's globe, as given below, p. 422.

the islands from which you must begin to shape your course steadily westward, and the places at which you are bound to arrive, and how far from the pole or from the equator you ought to keep away, and through how much space or through how many miles you are to arrive at places most fertile in all sorts of spices and gems; and do not wonder at my calling *west* the parts where the spices are, whereas they are commonly called *east*, because to persons sailing persistently westward those parts will be found by courses on the under side of the earth. For if [you go] by land and by routes on this upper side, they will always be found in the east. The straight lines drawn lengthwise upon the map indicate distance from east to west, while the transverse lines show distances from south to north. I have drawn upon the map various places upon which you may come, for the better information of the navigators in case of their arriving, whether through accident of wind or what not, at some different place from what they had expected; but partly in order that they may show the inhabitants that they have some knowledge of their country, which is sure to be a pleasant thing. It is said that none but merchants dwell in the islands.[1] For so great there is the number of navigators with their merchandise that in all the rest of the world there are not so many as in one very splendid port called Zaiton.[2] For they say that a

[1] All the description that follows is taken by Toscanelli from the book of Marco Polo.

[2] On modern maps usually called Chang-chow, about 100 miles S. W. from Fou chow.

hundred great ships of pepper unload in that port every year, besides other ships bringing other spices. That country is very populous and very rich, with a multitude of provinces and kingdoms and cities without number, under one sovereign who is called the Great Khan, which name signifies King of Kings, whose residence is for the most part in the province of Cathay. His predecessors two hundred years ago desired an alliance with Christendom ; they sent to the pope and asked for a number of persons learned in the faith, that they might be enlightened ; but those who were sent, having encountered obstacles on the way, returned.[1] Even in the time of Eugenius[2] there came one to Eugenius and made a declaration concerning their great goodwill toward Christians, and I had a long talk with him about many things, about the great size of their royal palaces and the remarkable length and breadth of their rivers, and the multitude of cities on the banks of the rivers, such that on one river there are about two hundred cities, with marble bridges very long and wide and everywhere adorned with columns. This country is worth seeking by the Latins, not only because great treasures may be obtained from it, — gold, silver, and all sorts of jewels and spices, — but on account of its learned men, philosophers, and skilled astrologers, and [in order that we may see] with what arts and devices so powerful and splendid a province is governed, and also [how] they conduct their wars. This for some sort of answer

[1] I have given an account of this mission, above, p. 281.

[2] Eugenius IV., pope from 1431 to 1447.

to his request, so far as haste and my occupations have allowed, ready in future to make further response to his royal majesty as much as he may wish. Given at Florence 25th June, 1474.'

"From[1] the city of Lisbon due west there are 26 spaces marked on the map, each of which contains 250 miles, as far as the very great and splendid city of Quinsay.[2] For it is a hundred miles in circumference and has ten bridges, and its name means City of Heaven, and many wonderful things are told about it and about the multitude of its arts and revenues. This space is almost a third part of the whole sphere. That city is in the province of Mangi, or near the province of Cathay in which land is the royal residence. But from the island of Antilia, which you know, to the very splendid island of

Conclusion of Toscanelli's first letter to Columbus.

[1] This paragraph is evidently the conclusion of the letter to Columbus, and not a part of the letter to Martinez, which has just ended with the date. In *Vita dell' Ammiraglio* the two letters are mixed together.

[2] On modern maps Hang-chow. After 1127 that city was for some time the capital of China, and Marco Polo's name *Quinsay* represents the Chinese word *King-sse* or "capital," now generally applied to Peking. Marco Polo calls it the finest and noblest city in the world. It appears that he does not overstate the circumference of its walls at 100 Chinese miles or *li*, equivalent to about 30 English miles. It has greatly diminished since Polo's time, while other cities have grown. Toscanelli was perhaps afraid to repeat Polo's figure as to the number of stone bridges; Polo says there were 12,000 of them, high enough for ships to pass under! We thus see how his Venetian fellow-citizens came to nickname him "Messer Marco Milione." As Colonel Yule says, "I believe we must not bring Marco to book for the literal accuracy of his statements as to the bridges; but all travellers have noticed the number and elegance of the bridges of cut stone in this part of China." *Marco Polo*, vol. ii. p. 144.

Cipango[1] there are ten spaces. For that island abounds in gold, pearls, and precious stones, and they cover the temples and palaces with solid gold. So through the unknown parts of the route the stretches of sea to be traversed are not great. Many things might perhaps have been stated more clearly, but one who duly considers what I have said will be able to work out the rest for himself. Farewell, most esteemed one."

Some time after the receipt of this letter Columbus wrote again to Toscanelli, apparently sending him either some charts of his own, or some notes, or something bearing upon the subject in hand. No such letter is preserved, but Toscanelli replied as follows: —

Toscanelli's second letter to Columbus.

"Paul, the physicist, to Christopher Columbus greeting.[2] I have received your letters, with the things which you sent me, for which I thank you very much. I regard as noble and grand your project of sailing from east to west according to the indications furnished by the map which I sent you, and which would appear still more plainly upon a sphere. I am much pleased to see that I have been well understood, and that the voyage has become not only possible

[1] For Cipango, or Japan, see Yule's *Marco Polo*, vol. ii. pp. 195–207. The venerable astronomer's style of composition is amusing. He sets out to demonstrate to Columbus that the part of the voyage to be accomplished through new and unfamiliar stretches of the Atlantic is not great; but he is so full of the glories of Cathay and Cipango that he keeps reverting to that subject, to the manifest detriment of his exposition. His argument, however, is perfectly clear.

[2] The original of this letter is not forthcoming. I translate from *Vita dell' Ammiraglio*, cap. viii.

but certain,[1] fraught with honour as it must be, and inestimable gain, and most lofty fame among all Christian people. You cannot take in all that it means except by actual experience, or without such copious and accurate information as I have had from eminent and learned men who have come from those places to the Roman court, and from merchants who have traded a long time in those parts, persons whose word is to be believed (*persone di grande autorità*). When that voyage shall be accomplished, it will be a voyage to powerful kingdoms, and to cities and provinces most wealthy and noble, abounding in all sorts of things most desired by us; I mean, with all kinds of spices and jewels in great abundance. It will also be advantageous for those kings and princes who are eager to have dealings and make alliances with the Christians of our countries, and to learn from the erudite men of these parts,[2] as well in religion as in all other branches of knowledge. For these reasons, and many others that might be mentioned, I do not wonder that you, who are of great courage, and the whole Portuguese nation, which has always had men distinguished in all such enterprises, are now inflamed with desire[3] to execute the said voyage."

[1] Yet poor old Toscanelli did not live to see it accomplished; he died in 1482, before Columbus left Portugal.

[2] That is, of Europe, and especially of Italy. Toscanelli again refers to Kublai Khan's message to the pope which — more or less mixed up with the vague notions about Prester John — had evidently left a deep impression upon the European mind. In translating the above sentence I have somewhat retrenched its excessive verbiage without affecting the meaning.

[3] In including the "whole Portuguese nation" as feeling this

These letters are intensely interesting, especially the one to Martinez, which reveals the fact that as early as 1474 the notion that a westward route to the Indies would be shorter than the southward route had somehow been suggested to Alfonso V.; and had, moreover, sufficiently arrested his attention to lead him to make inquiries of the most eminent astronomer within reach. Who could have suggested this notion to the king of Portugal? Was it Columbus, the trained mariner and map-maker, who might lately have been pondering the theories of Ptolemy and Mela as affected by the voyage of Santarem and Escobar, and whose connection with the Moñiz and Perestrelo families would now doubtless facilitate his access to the court? On some accounts this may seem probable, especially if we bear in mind Columbus's own statement implying that his appeals to the crown dated almost from the beginning of his fourteen years in Portugal.

Who first suggested the feasibleness of a westward route? Was it Columbus?

All the circumstances, however, seem to be equally consistent with the hypothesis that the first suggestion of the westward route may have come from Toscanelli himself, through the medium of the canon Martinez, who had for so many years been a member of King Alfonso's household. The words at the beginning of the letter lend some probability to this view: "I have formerly spoken with you about a shorter route to the places of Spices by

Perhaps it was Toscanelli.

desire, the good astronomer's enthusiasm again runs away with him.

ocean navigation than that which you are pursuing by Guinea." It was accordingly earlier than 1474 — how much earlier does not appear — that such discussions between Toscanelli and Martinez must probably have come to the ears of King Alfonso; and now, very likely owing to the voyage of Santarem and Escobar, that monarch began to think it worth while to seek for further information, "an exhibition to the eye," so that mariners not learned in astronomy like Toscanelli might "grasp and comprehend" the shorter route suggested. It is altogether probable that the Florentine astronomer, who was seventy-seven years old when he wrote this letter, had already for a long time entertained the idea of a westward route; and a man in whom the subject aroused so much enthusiasm could hardly have been reticent about it. It is not likely that Martinez was the only person to whom he descanted [1] upon the glory

[1] Luigi Pulci, in his famous romantic poem published in 1481, has a couple of striking stanzas in which Astarotte says to Rinaldo that the time is at hand when Hercules shall blush to see how far beyond his Pillars the ships shall soon go forth to find another hemisphere, for although the earth is as round as a wheel, yet the water at any given point is a plane, and inasmuch as all things tend to a common centre so that by a divine mystery the earth is suspended in equilibrium among the stars, just so there is an antipodal world with cities and castles unknown to men of olden time, and the sun in hastening westwards descends to shine upon those peoples who are awaiting him below the horizon: —

Sappi che questa opinione è vana
Perchè più oltre navicar si puote,
Però che l' acqua in ogni parte è piana,
Benchè la terra abbi forma di ruote;
Era più grossa allor la gente umana,
Tal che potrebbe arrossirne le gote
Ercule ancor, d' aver posti que' segni,
Perchè più oltre passerannо i legni.

and riches to be found by sailing "straight to Cathay," and there were many channels through which Columbus might have got some inkling of his views, even before going to Portugal.

However this may have been, the letter clearly proves that at that most interesting period, in or about 1474, Columbus was already meditating upon the westward route.[1] Whether he owed the

> E puossi andar giù nell' altro emisperio,
> Però che al centro ogni cosa reprime:
> Sicchè la terra per divin misterio
> Sospesa sta fra le stelle sublime,
> E laggiù son città, castella, e imperio;
> Ma nol cognobbon quelle gente prime.
> Vedì che il sol di camminar s' affretta,
> Dove io dico che laggiù s' aspetta.
>
> Pulci, *Morgante Maggiore*, xxv. 229, 230.

This prophecy of western discovery combines with the astronomical knowledge here shown, to remind us that the Florentine Pulci was a fellow-townsman and most likely an acquaintance of Toscanelli.

[1] It was formerly assumed, without hesitation, that the letter from Toscanelli to Columbus was written and sent in 1474. The reader will observe, however, that while the enclosed letter to Martinez is dated June 25, 1474, the letter to Columbus, in which it was enclosed, has no date. But according to the text as given in *Vita dell' Ammiraglio*, cap. viii., this would make no difference, for the letter to Columbus was sent only a few days later than the original letter to Martinez: "I send you a copy of another letter, which I wrote a few days ago (*alquanti giorni fa*) to a friend of mine, a gentleman of the household of the king of Portugal before the wars of Castile, in reply to another," etc. This friend, Martinez, had evidently been a gentleman of the household of Alfonso V. since before the civil wars of Castile, which in 1474 had been going on intermittently for nine years under the feeble Henry IV., who did not die until December 12, 1474. Toscanelli apparently means to say "a friend of mine who has for ten years or more been a gentleman of the royal household," etc.; only instead of mentioning the number of years, he alludes less precisely (as most people, and perhaps especially old people, are apt to do) to the most notable, mentionable, and glaring fact in

idea to Toscanelli, or not, is a question of no great importance so far as concerns his own originality; for the idea was already in the air. The originality of Columbus did not consist in his conceiving the

The idea was suggested by the globular form of the earth;

the history of the Peninsula for that decade, — namely, the civil wars of Castile. As if an American writer in 1864 had said, "a friend of mine, who has been secretary to A. P. since before the war," instead of saying "for four years or more." This is the only reasonable interpretation of the phrase as it stands above, and it was long ago suggested by Humboldt (*Examen critique*, tom. i. p. 225). Italian and Spanish writers of that day, however, were lavish with their commas and sprinkled them in pretty much at haphazard. In this case Ferdinand's translator, Ulloa, sprinkled in one comma too many, and it fell just in front of the clause "before the wars of Castile;" so that Toscanelli's sentence was made to read as follows: "I send you a copy of another letter, which I wrote a few days ago to a friend of mine, a gentleman of the household of the king of Portugal, before the wars of Castile, in reply to another," etc. Now this unhappy comma, coming after the word "Portugal," has caused ream after ream of good paper to be inked up in discussion, for it has led some critics to understand the sentence as follows: "I send you a copy of another letter, which I wrote a few days ago, before the wars of Castile, to a friend of mine," etc. This reading brought things to a pretty pass. Evidently a letter dated June 25, 1474, could not have been written before the civil wars of Castile, which began in 1465. It was therefore assumed that the phrase must refer to the "War of Succession" between Castile and Portugal (in some ways an outgrowth from the civil wars of Castile) which began in May, 1475, and ended in September, 1479. M. d'Avezac thinks that the letter to Columbus must have been written after the latter date, or more than five years later than the enclosed letter. M. Harrisse is somewhat less exacting, and is willing to admit that it may have been written at any time after this war had fairly begun, — say in the summer of 1475, not more than a year or so later than the enclosed letter. Still he is disposed on some accounts to put the date as late as 1482. The phrase *alquanti giorni fa* will not allow either of these interpretations. It means "a few days ago," and cannot possibly mean a year ago, still less five years ago. The Spanish retranslator from Ulloa

possibility of reaching the shores of Cathay by sailing west, but in his conceiving it in such distinct

renders it exactly *algunos dias há* (Navarrète, *Coleccion*, tom. ii. p. 7), and Humboldt (*loc. cit.*) has it *il y a quelques jours*. If we could be sure that the expression is a correct rendering of the lost Latin original, we might feel sure that the letter to Columbus must have been written as early as the beginning of August, 1474. But now the great work of Las Casas, after lying in manuscript for 314 years, has at length been published in 1875. Las Casas gives a Spanish version of the Toscanelli letters (*Historia de las Indias*, tom. i. pp. 92–97), which is unquestionably older than Ulloa's Italian version, though perhaps not necessarily more accurate. The phrase in Las Casas is not *algunos dias há*, but *há dias*, i. e. not "a few days ago," but "some time ago." Just which expression Toscanelli used cannot be determined unless somebody is fortunate enough to discover the lost Latin original. The phrase in Las Casas admits much more latitude of meaning than the other. I should suppose that *há dias* might refer to an event a year or two old, which would admit of the interpretation considered admissible by M. Harrisse. I should hardly suppose that it could refer to an event five or six years old; if Toscanelli had been referring in 1479 or 1480 to a letter written in 1474, his phrase would probably have appeared in Spanish as *algunos años há*, i. e. "a few years ago," not as *há dias*. M. d'Avezac's hypothesis seems to me not only inconsistent with the phrase *há dias*, but otherwise improbable. The frightful anarchy in Castile, which began in 1465 with the attempt to depose Henry IV. and alter the succession, was in great measure a series of ravaging campaigns and raids, now more general, now more local, and can hardly be said to have come to an end before Henry's death in 1474. The war which began with the invasion of Castile by Alfonso V. of Portugal, in May, 1475, was simply a later phase of the same series of conflicts, growing out of disputed claims to the crown and rivalries among great barons, in many respects similar to the contemporary anarchy in England called the Wars of the Roses. It is not likely that Toscanelli, writing at any time between 1475 and 1480, and speaking of the "wars of Castile" in the plural, could have had 1474 in his mind as a date previous to those wars; to his mind it would have rightly appeared as a date in the midst of them. In any case, therefore, his reference must be to a time before 1465, and Humboldt's interpretation is in all

and practical shape as to be ready to make the adventure in his own person. As a matter of theory the possibility of such a voyage could not fail to be suggested by the globular form of the earth; and ever since the days of Aristotle that had been generally admitted by men learned in physical science. Aristotle proved, from the different altitudes of the pole-star in different places, that the earth must necessarily be a globe. Moreover, says Aristotle, "some stars are seen in Egypt or at Cyprus, but are not seen in the countries to the north of these: and the stars that in the north are visible while they make a complete circuit, there undergo a setting. So that from this it is manifest, not only that the form of the earth is round, but also that it is part of not a very large sphere: for otherwise the difference would not be so obvious to persons making so small a change of place. Wherefore we may judge that *those persons who connect the region in the neighbourhood of the Pillars of Hercules with that towards India, and who assert that in this way the sea is* ONE, do not assert things very improbable."[1] It

probability correct. The letter from Toscanelli to Columbus was probably written within a year or two after June 25, 1474.

On account of the vast importance of the Toscanelli letters, and because the early texts are found in books which the reader is not likely to have at hand, I have given them entire in the Appendix at the end of this work.

[1] Ὅστε τὰ πρὸς τὰς ἀρκτους μεγάλην ἔχει τὴν μεταβολήν, καὶ αἱ πλεῖστα φαίνεται, πρὸς δύσιν τε καὶ ἀνατολὰς μεταβαίνουσιν· ἔνιοι γὰρ ἐν Αἰγύπτῳ μὲν ἀστέρες ὁρῶνται, καὶ πρὸς Κύπρῳ· οἱ δὲ πρὸς βορρᾶν οὐχ ὁρῶνται. καὶ τὰ ἀεὶ φαινόμενα τῶν ἄστρων, ἐν ἐκείνοις πρὸς μεσημβρίαν ποιεῖται δύσιν. Ὥστε οὐ μόνον ἐκ τούτων δῆλον περιφερὲς τὸ σχῆμα

thus appears that more than eighteen centuries before Columbus took counsel of Toscanelli, "those persons" to whom Aristotle alludes were discussing, as a matter of theory, this same subject. Eratosthenes held that it would be easy enough to sail from Spain to India on the same parallel were it not for the vast extent of the Atlantic ocean.[1] On the other hand, Seneca maintained that the distance was probably not so very great, and that with favouring winds a ship might make the voyage in a few days.[2] In one of his tragedies Seneca has a striking passage[3] which has been repeatedly quoted as referring to the discovery of America, and is certainly one of

and was as old as Aristotle.

τῆς γῆς, ἀλλὰ καὶ σφαίρας οὐ μεγάλης. Οὐ γὰρ ἂν οὕτω ταχὺ ἐπιδηλον ἐποίει μεθιστεμένοις οὕτω βραχύ. Διὸ τοὺς ὑπολαμβάνοντας συνάπτειν τὸν περὶ τὰς Ἡρακλείους στήλας τόπον τῷ περὶ τὴν Ἰνδικὴν, καὶ τοῦτον τὸν τρόπον εἶναι τὴν Θάλατταν μίαν, μὴ λίαν ὑπολαμβάνειν ἄπιστα δοκεῖν. Aristotle, *De Cœlo*, ii. 14. He goes on to say that "those persons" allege the existence of elephants alike in Mauretania and in India in proof of their theory.

[1] Ὥστ' εἰ μὴ τὸ μέγεθος τοῦ Ἀτλαντικοῦ πελάγους ἐκώλυε, κἂν πλεῖν ἡμᾶς ἐκ τῆς Ἰβηρίας εἰς τὴν Ἰνδικὴν διά τοῦ αὐτοῦ παραλλήλου. Strabo, i. 4, § 6.

[2] "Quantum enim est, quod ab ultimis litoribus Hispaniæ usque ad Indos jacet? Paucissimorum dierum spatium, si navem suus ventus implevit." Seneca, *Nat. Quæst.*, i. præf. § 11.

[3] Venient annis sæcula seris,
Quibus Oceanus vincula rerum
Laxet, et ingens pateat tellus,
Tethysque novos detegat orbes,
Nec sit terris ultima Thule.
Seneca, *Medea*, 376.

In the copy of Seneca's tragedies, published at Venice in 1510, bought at Valladolid by Ferdinand Columbus in March, 1518, for 4 reals (plus 2 reals for binding), and now to be seen at the Biblioteca Colombina, there is a marginal note attached to these verses: "hæc prophetia expleta ē per patrē meuȝ cristoforū colō almirātē anno 1492."

the most notable instances of prophecy on record. There will come a time, he says, in the later years, when Ocean shall loosen the bonds by which we have been confined, when an immense land shall lie revealed, and Tethys shall disclose new worlds, and Thule will no longer be the most remote of countries. In Strabo there is a passage, less commonly noticed, which hits the truth — as we know it to-day — even more closely. Having argued that the total length of the Inhabited World is only about a third part of the circumference of the earth in the temperate zone, he suggests it as possible, or even probable, that within this space there may be another Inhabited World, or even more than one; but such places would be inhabited by different races of men, with whom the geographer, whose task it is to describe the *known* world, has no concern.[1] Nothing could better illustrate the philosophical character of Strabo's mind. In such speculations, so far as his means of verification went, he was situated somewhat as we are to-day with regard to the probable inhabitants of Venus or Mars.

Opinions of ancient writers.

Early in the Christian era we are told by an

[1] Καλοῦμεν γὰρ οἰκουμένην ἣν οἰκοῦμεν καὶ γνωρίζομεν · ἐνδέκεται δὲ καὶ ἐν τῇ αὐτῇ εὐκράτῳ ζώνῃ καὶ δύο οἰκουμένας εἶναι ἢ καὶ πλείους. Strabo, i. 4, § 6; καὶ γὰρ εἰ οὕτως ἔχει, οὐχ ὑπὸ τούτων γε οἰκεῖται τῶν παρ' ἡμῖν · ἀλλ' ἐκείνην ἄλλην οἰκουμένην θετέον. ὅπερ ἐστὶ πιθανόν. Ἡμῖν δὲ τὰ ἐν αὐτῇ ταῦτα λεκτέον. Id. ii. 5, § 13. This has always seemed to me one of the most remarkable anticipations of modern truth in all ancient literature. Mr. Bunbury thinks it may have suggested the famous verses of Seneca just quoted. *History of Ancient Geography*, vol. ii. p. 224.

eminent Greek astronomer that the doctrine of the earth's sphericity was accepted by all competent persons except the Epicureans.[1] Among the Fathers of the Church there was some difference of opinion; while in general they denied the existence of human beings beyond the limits of their Œcumene, or Inhabited World, this denial did not necessarily involve disbelief in the globular figure of the earth.[2] The views of the great mass of people, and of the more ignorant of the clergy, down to the time of Columbus, were probably well represented in the book of Cosmas Indicopleustes already cited.[3] Nevertheless among the more enlightened clergy the views of the ancient astronomers were never quite forgotten, and in the great revival of intellectual life in the thirteenth century the doctrine of the earth's sphericity was again brought prominently into the foreground. We find Dante basing upon it the cosmical theory elaborated in his immortal poem.[4] In 1267 Roger Bacon — stimulated, no doubt, by the reports of the ocean east of Cathay — collected passages from ancient writers

Opinions of Christian writers.

Roger Bacon.

[1] Οἱ δὲ ἡμέτεροι [i. e. the Stoics] καὶ ἀπὸ μαθημάτων πάντες, καὶ οἱ πλείους τῶν ἀπὸ τοῦ Σωκρατικοῦ διδασκαλείου σφαιρικὸν εἶναι τὸ σχῆμα τῆς γῆς διεβεβαιώσαντο. Cleomedes, i. 8; cf. Lucretius, *De Rerum Nat.*, i. 1052–1082; Stobæus, *Eclog.* i. 19; Plutarch, *De facie in Orbe Luna*, cap. vii.

[2] See Augustine, *De civitate Dei*, xvi. 9; Lactantius, *Inst. Div.*, iii. 23; Jerome, *Comm. in Ezechiel*, i. 6; Whewell's *History of the Inductive Sciences*, vol i. p. 196.

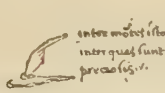
[3] See above, p. 266.

[4] For an account of the cosmography of the Divine Comedy illustrated with interesting diagrams, see Artaud de Montor, *Histoire de Dante Alighieri*, Paris, 1841.

to prove that the distance from Spain to the eastern shores of Asia could not be very great. Bacon's argument and citations were copied in an extremely curious book, the "Imago Mundi," published in 1410 by the Cardinal Pierre d'Ailly, Bishop of Cambrai, better known by the Latinized form of his name as Petrus Alliacus. This treatise, which throughout the fifteenth century enjoyed a great reputation, was a favourite book with Columbus, and his copy of it, covered with marginal annotations in his own handwriting, is still preserved among the priceless treasures of the Biblioteca Colombina.[1] He found in it strong confirmation of his views, and it is not impossible that the reading of it may have first put such ideas into his head. Such a point, however, can hardly be determined. As I have already observed, these ideas were in the air. What Columbus did was not to originate them, but to incarnate them in facts and breathe into them the breath of life. It was one thing to suggest, as a theoretical

The "Imago Mundi" of Petrus Alliacus.

[1] It was first printed without indication of place or date, but probably the place was Paris and the date somewhere from 1483 to 1490. Manuscript copies were very common, and Columbus probably knew the book long before that time. There is a good account of it in Humboldt's *Examen critique*, tom. i. pp. 61–76, 96–108. Humboldt thinks that such knowledge as Columbus had of the opinions of ancient writers was chiefly if not wholly obtained from Alliacus. It is doubtful if Columbus had any direct acquaintance with the works of Roger Bacon, but he knew the *Liber Cosmographicus* of Albertus Magnus and the *Speculum Naturale* of Vincent de Beauvais (both about 1250), and drew encouragement from them. He also knew the book of Mandeville, first printed in French at Lyons in 1480, and a Latin translation of Marco Polo, published in 1485, a copy of which, with marginal MS. notes, is now in the Colombina.



Annotations by Columbus.

possibility, that Cathay might be reached by sailing westward; and it was quite another thing to prove that the enterprise was feasible with the ships and instruments then at command.

The principal consideration, of course, was the distance to be traversed; and here Columbus was helped by an error which he shared with many geographers of his day. He somewhat underestimated the size of the earth, and at the same time greatly overestimated the length of Asia. The first astronomer to calculate, by scientific methods, the circumference of our planet at the equator was Eratosthenes (B. C. 276–196), and he came — all things considered — fairly near the truth; he made it 25,200 geographical miles (of ten stadia), or about one seventh too great. The true figure is 21,600 geographical miles, equivalent to 24,899 English statute miles.[1] Curiously enough, Posidonius, in revising this calculation a century later, reduced the figure to 18,000 miles, or about one seventh too small. The circumference in the latitude of Gibraltar he estimated at 14,000 miles; the length of the Œcumene, or Inhabited World, he called 7,000; the distance across the Atlantic from the Spanish strand to the eastern shores of Asia was the other 7,000. The error of Posidonius was partially rectified by Ptolemy, who made the equatorial circumference 20,400 geographical miles, and

Ancient estimates of the size of the globe and the length of the Œcumene.

[1] See Herschel's *Outlines of Astronomy*, p. 140. For an account of the method employed by Eratosthenes, see Delambre, *Histoire de l'astronomie ancienne*, tom. i. pp. 86–91; Lewis, *Astronomy of the Ancients*, p. 198.

the length of a degree 56.6 miles.[1] This estimate, in which the error was less than one sixteenth, prevailed until modern times. Ptolemy also supposed the Inhabited World to extend over about half the circumference of the temperate zone, but the other half he imagined as consisting largely of bad lands, quagmires, and land-locked seas, instead of a vast and open ocean.[2]

Ptolemy's opinion as to the length of the Inhabited World was considerably modified in the minds of those writers who toward the end of the Middle Ages had been strongly impressed by the book of Marco Polo. Among these persons was Toscanelli. This excellent astronomer calculated the earth's equatorial circumference at almost exactly the true figure; his error was less than 124 English miles in excess. The circumference in the latitude of Lisbon he made $26 \times 250 \times 3 = 19{,}500$ miles.[3] Two thirds of this figure, or 13,000 miles, he allowed

Toscanelli's calculation of the size of the earth,

[1] See Bunbury's *History of Ancient Geography*, vol. ii. pp. 95–97, 546–579; Müller and Donaldson, *History of Greek Literature*, vol. iii. p. 268.

[2] Strabo, in arguing against this theory of bad lands, etc., as obstacles to ocean navigation — a theory which seems to be at least as old as Hipparchus — has a passage which finely expresses the loneliness of the sea: — Οὔτε γὰρ περιπλεῖν ἐπιχειρήσαντες, εἶτα ἀναστρέψαντες, οὐχ ὑπὸ ἠπείρου τινὸς ἀντιπιπτούσης καὶ κωλυούσης, τὸν ἐπέκεινα πλοῦν ἀνακρουσθῆναι φασὶν, ἀλλὰ ὑπὸ ἀπορίας καὶ ἐρημίας, οὐδὲν ἧττον τῆς θαλάττης ἐχούσης τὸν πόρον (lib. i. cap. i. § 8). When one thinks of this ἀπορία and ἐρημία, one fancies oneself far out on the Atlantic, alone in an open boat on a cloudy night, bewildered and hopeless.

[3] See above, p. 360. Toscanelli's mile was nearly equivalent to the English statute mile. See the very important note in Winsor, *Narr. and Crit. Hist.*, vol. i. p. 51.

for the length of the Œcumene, from Lisbon eastward to Quinsay (i. e. Hang-chow), leaving 6,500 for the westward voyage from Lisbon to Quinsay. Thus Toscanelli elongated Asia by nearly the whole width of the Pacific ocean. His Quinsay would come about 130° W., a few hundred miles west of the mouth of the Columbia river. Zaiton (i. e. Chang-chow), the easternmost city in Toscanelli's China, would come not far from the tip end of Lower California. Thus the eastern coast of Cipango, about a thousand miles east from Zaiton, would fall in the Gulf of Mexico somewhere near the ninety-third meridian, and that island, being over a thousand miles in length north and south, would fill up the space between the parallel of New Orleans and that of the city of Guatemala. The westward voyage from the Canaries to Cipango, according to Toscanelli, would be rather more than 3,250 miles, but at a third of the distance out he placed the imaginary island of "Antilia," with which he seems to have supposed Portuguese sailors to be familiar.[1] "So through the unknown parts of the route," said the venerable astronomer, "the stretches of sea to be traversed are not great,"

and of the position of Cipango.

[1] The reader will also notice upon Toscanelli's map the islands of Brazil and St. Brandan. For an account of all these fabulous islands see Winsor, *Narr. and Crit. Hist.*, vol. i. pp. 46–51. The name of "Antilia" survives in the name "Antilles," applied since about 1502 to the West India islands. All the islands west of Toscanelli's ninetieth meridian belong in the Pacific. He drew them from his understanding of the descriptions of Marco Polo, Friar Odoric, and other travellers. These were the islands supposed, rightly, though vaguely, to abound in spices.

— not much more than 2,000 English miles, not so long as the voyage from Lisbon to the Guinea coast.

While Columbus attached great importance to these calculations and carried Toscanelli's map with him upon his first voyage, he improved somewhat upon the estimates of distance, and thus made his case still more hopeful. Columbus was not enough of an astronomer to adopt Toscanelli's improved measurement of the size of the earth. He accepted Ptolemy's figure of 20,400 geographical miles for the equatorial girth,[1] which would make the circumference in the latitude of

Columbus's opinion of the size of the globe, the length of the Œcumene, and the width of the Atlantic ocean.

[1] Columbus was confirmed in this opinion by the book of the Arabian astronomer Alfragan, written about A. D. 950, a Latin translation of which appeared in 1447. There is a concise summary of it in Delambre, *Histoire de l'astronomie du Moyen Age*, pp. 63–73. Columbus proceeded throughout on the assumption that the length of a degree at the equator is 56.6 geographical miles, instead of the correct figure 60. This would oblige him to reduce all Toscanelli's figures by about six per cent., to begin with. Upon this point we have the highest authority, that of Columbus himself, in an autograph marginal note in his copy of the *Imago Mundi*, where he expresses himself most explicitly: "Nota quod sepius navigando ex Ulixbona ad Austrum in Guineam, notavi cum diligentia viam, ut solitum naucleris et malineriis, et preteria accepi altitudinem solis cum quadrante et aliis instrumentis plures vices, et inveni concordare cum Alfragano, videlicet respondere quemlibet gradum milliariis 56⅔. Quare ad hanc mensuram fidem adhibendam. Tunc igitur possumus dicere quod circuitus Terræ sub aræ equinoctiali est 20,400 milliariorum. Similiterque id invenit magister Josephus phisicus et astrologus et alii plures missi specialiter ad hoc per serenissimum regem Portugaliæ," etc.; *anglicè*, "Observe that in sailing often from Lisbon southward to Guinea, I carefully marked the course, according to the custom of skippers and mariners, and moreover I took the sun's altitude several times with a quadrant and other instru-

the Canaries about 18,000; and Columbus, on the strength of sundry passages from ancient authors which he found in Alliacus (cribbed from Roger Bacon), concluded that six sevenths of this circumference must be occupied by the Œcumene, including Cipango, so that in order to reach that wonderful island he would only have to sail over one seventh, or not much more than 2,500 miles from the Canaries.[1] An authority upon which he

ments, and in agreement with Alfragan I found that each degree [i. e. of longitude, measured on a great circle] answers to $56\frac{2}{3}$ miles. So that one may rely upon this measure. We may therefore say that the equatorial circumference of the earth is 20,400 miles. A similar result was obtained by Master Joseph, the physicist [or, perhaps, physician] and astronomer, and several others sent for this special purpose by the most gracious king of Portugal." — Master Joseph was physician to John II. of Portugal, and was associated with Martin Behaim in the invention of an improved astrolabe which greatly facilitated ocean navigation. — The exact agreement with Ptolemy's figures shows that by a mile Columbus meant a geographical mile, equivalent to ten Greek stadia.

[1] One seventh of 18,000 is 2,571 geographical miles, equivalent to 2,963 English miles. The actual length of Columbus's first voyage, from last sight of land in the Canaries to first sight of land in the Bahamas, was according to his own dead reckoning about 3,230 geographical miles. See his journal in Navarrete, *Coleccion*, tom. i. pp. 6–20.

I give here in parallel columns the passage from Bacon and the one from Alliacus upon which Columbus placed so much reliance. In the Middle Ages there was a generous tolerance of much that we have since learned to stigmatize as plagiarism.

From Roger Bacon, *Opus Majus* (A. D. 1267), London, 1733, ed. Jebb, p. 183: — "Sed Aristoteles vult in fine secundi Cœli et Mundi quod plus [terræ] habitetur quam quarta pars. Et Averroes hoc confirmat. Dicit

From Petrus Alliacus, *De imagine Mundi* (A. D. 1410), Paris, cir. 1490, cap. viii. fol. 13 b: — "Summus Aristoteles dicit quod mare parvum est inter finem Hispaniæ a parte occidentis et inter principium Indiæ

placed great reliance in this connection was the fourth book of Esdras, which although not a canonical part of the Bible was approved by holy men, and which ex-

The fourth book of Esdras.

Aristoteles quod mare parvum est inter finem Hispaniæ a parte occidentis et inter principium Indiæ a parte orientis. Et Seneca, libro quinto Naturalium, dicit quod mare hoc est navigabile in paucissimis diebus si ventus sit conveniens. Et Plinius docet in Naturalibus quod navigatum est a sinu Arabico usque ad Gades: unde refert quendam fugisse a rege suo præ timore et intravit sinum Maris Rubri . . . qui circiter spatium navigationis annualis distat a Mari Indico: . . . ex quo patet principium Indiæ in oriente multum a nobis distare et ab Hispania, postquam tantum distat a principio Arabiæ versus Indiam. A fine Hispaniæ sub terra tam parvum mare est quod non potest cooperire tres quartas terræ. Et hoc per auctoritatem alterius considerationis probatur. Nam Esdras dicit quarto libro, quod sex partes terræ sunt habitatæ et septima est cooperta aquis. Et ne aliquis impediat hanc auctoritatem, dicens quod liber ille est apocryphus et ignotæ auctoritatis, dicendum est quod sancti habuerunt illum librum in usu et confirmant veritates sacras per illum librum."

a parte orientis, et vult quod plus habitetur quam quarta pars, et Averroes hoc confirmat. Insuper Seneca, libro quinto Naturalium, dicit quod mare est navigabile in paucis diebus si ventus sit conveniens. Et Plinius docet in Naturalibus, libro secundo, quod navigatum est a sinu Arabico usque ad Gades Herculis non multum magno tempore,

unde concludunt aliqui, quod mare non est tantum quod possit cooperire tres quartas terræ. Accedit ad hoc auctoritas Esdræ libro suo quarto, dicentis quod sex partes

terrae sunt habitatæ et septima est cooperta aquis,

cujus libri auctoritatem sancti habuerunt in reverentia."

Columbus must either have carried the book of Alliacus with

pressly asserted that six parts of the earth (i. e. of the length of the Œcumene, or north temperate zone) are inhabited and only the seventh part covered with water. From the general habit of Columbus's mind it may be inferred that it was chiefly upon this scriptural authority that he based his confident expectation of finding land soon after accomplishing seven hundred leagues from the Canaries. Was it not as good as written in the Bible that land was to be found there?

Thus did Columbus arrive at his decisive conclusion, estimating the distance across the Sea of Darkness to Japan at something less than the figure which actually expresses the distance to the West Indies. Many a hopeful enterprise has been ruined by errors in figuring, but this wrong cal-

him on his voyages, or else have read his favourite passages until he knew them by heart, as may be seen from the following passage of a letter, written from Hispaniola in 1498 to Ferdinand and Isabella (Navarrete, tom i. p. 261): "El Aristotel dice que este mundo es pequeño y es el agua muy poca, y que facilmente se puede pasar de España à las Indias, y esto confirma el Avenryz [Averroes], y le alega el cardenal Pedro de Aliaco, autorizando este decir y aquel de Seneca, el qual conforma con estos. . . . À esto trae una autoridad de Esdras del tercero libro suyo, adonde dice que de siete partes del mundo las seis son descubiertas y la una es cubierta de agua, la cual autoridad es aprobada por Santos, los cuales dan autoridad al 3° é 4° libro de Esdras, así come es S. Agustin é S. Ambrosio en su *exámeron*," etc. — "Singular period," exclaims Humboldt, "when a mixture of testimonies from Aristotle and Averroes, Esdras and Seneca, on the small extent of the ocean compared with the magnitude of continental land, afforded to monarchs guarantees for the safety and expediency of costly enterprises!" *Cosmos*, tr. Sabine, vol. ii. p. 250 The passages cited in this note may be found in Humboldt, *Examen critique*, tom. i. pp. 65–69. Another interesting passage from *Imago Mundi*, cap. xv., is quoted on p. 78 of the same work.

culation was certainly a great help to Columbus. When we consider how difficult he found it to obtain men and ships for a voyage supposed to be not more than 2,500 miles in this new and untried direction, we must admit that his chances would have been poor indeed if he had proposed to sail westward on the Sea of Darkness for nearly 12,000 miles, the real distance from the Canaries to Japan. It was a case where the littleness of the knowledge was not a dangerous but a helpful thing. If instead of the somewhat faulty astronomy of Ptolemy and the very hazy notions prevalent about "the Indies," the correct astronomy of Toscanelli had prevailed and had been joined to an accurate knowledge of eastern Asia, Columbus would surely never have conceived his great scheme, and the discovery of America would probably have waited to be made by accident.[1] The whole point of his scheme lay in its promise of a shorter route to the Indies than that which the Portuguese were seeking by way of Guinea. Unless it was probable that it could furnish such a shorter route, there was no reason for such an extraordinary enterprise.

Fortunate mixture of truth and error.

The whole point and purport of Columbus's scheme.

The years between 1474 and 1480 were not favourable for new maritime ventures on the part of the Portuguese government. The war with Castile absorbed the energies of Alfonso V. as well as his money, and he was badly beaten into the bargain. About this time Columbus was writing a treatise

[1] See below, vol. ii. p. 96.

on "the five habitable zones," intended to refute the old notions about regions so fiery or so frozen as to be inaccessible to man. As this book is lost we know little or nothing of its views and speculations, but it appears that in writing it Columbus utilized sundry observations made by himself in long voyages into the torrid and arctic zones. He spent some time at the fortress of San Jorge de la Mina, on the Gold Coast, and made a study of that equinoctial climate.[1] This could not have been earlier than 1482, the year in which the fortress was built. Five years before this he seems to have gone far in the opposite direction. In a fragment of a letter or diary, preserved by his son and by Las Casas, he says: — "In the month of February, 1477, I sailed a hundred leagues beyond the island of Thule, [to ?] an island of which the south part is in latitude 73°, not 63°, as some say; and it [i. e. Thule] does not lie within Ptolemy's western boundary, but much farther west. And to this island, which is as big as England, the English go with their wares, especially from Bristol. When I was there the sea was not frozen. In some places the tide rose and fell twenty-six fathoms. It is true that the Thule mentioned by Ptolemy lies where he says it does, and this by the moderns is called Frislanda." [2]

Columbus's speculations on climate.

His voyage to Guinea.

His voyage into the Arctic ocean, 1477.

[1] *Vita dell' Ammiraglio*, cap. iv.; Las Casas, *Historia*, tom. i. p. 49.

[2] "Io navigai l' anno M CCCC LXXVII nel mese di Febraio oltra Tile isola cento leghe, la cui parte Australe è lontana dall' Equinottiale settantatrè gradi, e non sessantatrè, come alcuni vogliono; nè giace dentro della linea, che include l' Occidente di Tolomeo,

Taken as it stands this passage is so bewildering that we can hardly suppose it to have come in just this shape from the pen of Columbus. It looks as if it had been abridged from some diary of his by some person unfamiliar with the Arctic seas; and I have ventured to insert in brackets a little preposition which may perhaps help to straighten out the meaning. By Thule Columbus doubtless means Iceland, which lies between latitudes 64° and 67°, and it looks as if he meant to say that he ran beyond it as far as the little island, just a hundred leagues from Iceland and in latitude 71°, since discovered by Jan Mayen in 1611. The rest of the paragraph is more intelligible. It is true that Iceland lies thirty degrees farther west than Ptolemy placed Thule; and that for a century before the discovery of the Newfoundland fisheries the English did much fishing in the waters about Iceland,

He may have reached Jan Mayen island,

ma è molto più Occidentale. Et a questa isola, che è tanto grande, come l' Inghilterra, vanno gl' Inglesi con le loro mercatantie, specialmente quelli di Bristol. Et al tempo che io vi andai, non era congelato il mare, quantunque vi fossero si grosse marce, che in alcuni luoghi ascendeva ventisei braccia, e discendeva altretanti in altezza. È bene il vero, che Tile, quella, di cui Tolomeo fa mentione, giace dove egli dice; & questa da' moderni è chiamata Frislanda." *Vita dell' Ammiraglio*, cap. iv. In the original edition of 1571, there are no quotation-marks; and in some modern editions, where these are supplied, the quotation is wrongly made to end just before the last sentence, so as to make it appear like a gloss of Ferdinand's. This is, however, impossible. Ferdinand died in 1539, and the Zeno narrative of Frislanda was not published till 1558, so that the only source from which that name could have come into his book was his father's document. The genuineness of the passage is proved by its recurrence, almost word for word, in Las Casas, *Historia*, tom. i. p. 48.

and carried wares thither, especially from Bristol.[1] There can be no doubt that by Frislanda Columbus means the Færoe islands,[2] which do lie in the latitude though not in the longitude mentioned by Ptolemy. As for the voyage into the Jan Mayen waters in February, it would be dangerous but by no means impossible.[3] In another letter Columbus mentions visiting England, apparently in connection with this voyage,[4] and it is highly probable that he went in an English ship from Bristol.

and stopped at Iceland.

The object of Columbus in making these long voyages to the equator and into the polar circle was, as he tells us, to gather observations upon climate. From the circumstance of his having made a stop at some point in Iceland, it was conjectured by Finn Magnusson that Columbus might have learned something about Vinland which served to guide him to his own enterprise or to encourage him in it. Starting from this suggestion, it has been argued[5] that Columbus must have read the geographical appendix to Adam of Bremen's "Ecclesiastical History;" that he must

The hypothesis that Columbus "must have" heard and understood the story of the Vinland voyages.

[1] See Thorold Rogers, *The Economic Interpretation of History*, London, 1888, pp. 103, 319.

[2] See above, p. 236.

[3] See the graphic description of a voyage in these waters in March, 1882, in Nansen's *The First Crossing of Greenland*, London, 1890, vol. i. pp. 149–152.

[4] "E vidi tutto il Levante, e tutto il Ponente, che si dice per andare verso il Settentrione. cioè l' Inghilterra, e ho camminato per la Guinea." *Vita dell' Ammiraglio*, cap. iv.

[5] See Anderson's *America not discovered by Columbus*, Chicago, 1874; 3d ed. enlarged, Chicago, 1883.

have understood, as we now do, the reference therein made to Vinland; that he made his voyage to Iceland in order to obtain further information; that he there not only heard about Vinland and other localities mentioned in the sagas, but also mentally placed them about where they were placed in 1837 by Professor Rafn; that, among other things, he thus obtained a correct knowledge of the width of the Atlantic ocean in latitude 28° N.; and that during fifteen subsequent years of weary endeavour to obtain ships and men for his westward voyage, he sedulously refrained from using the most convincing argument at his command, — namely that land of continental dimensions had actually been found (though by a very different route) in the direction which he indicated.

I have already given an explanation of the process by which Columbus arrived at the firm belief that by sailing not more than about 2,500 geographical miles due west from the Canaries he should reach the coast of Japan. Every step of that explanation is sustained by documentary evidence, and as his belief is thus completely accounted for, the hypothesis that he may have based it upon information obtained in Iceland is, to say the least, superfluous. We do not need it in order to explain his actions, and accordingly his actions do not afford a presumption in favour of it. There is otherwise no reason, of course, for refusing to admit that he might have obtained information in Iceland, were there any evidence that he did. But not a scrap

That hypothesis has no evidence in its favour.

of such evidence has ever been produced. Every step in the Scandinavian hypothesis is a pure assumption.

First it is assumed that Columbus *must* have read the appendix to Adam of Bremen's history. But really, while it is not impossible that he should have read that document, it is, on the whole, improbable. The appendix was first printed in Lindenbrog's edition, published at Leyden, in 1595. The eminent Norwegian historian, Gustav Storm, finds that in the sixteenth century just six MSS. of Adam's works can now be traced. Of these, two were preserved in Denmark, two in Hamburg, one had *perhaps* already wandered southward to Leyden, and one as far as Vienna. Dr. Storm, therefore, feels sure that Columbus never saw Adam's mention of Vinland, and pithily adds that "had Columbus known it, it would not have been able to show him the way to the West Indies, but perhaps to the North Pole."[1] From the account of this mention and its context, which I have already given,[2] it is in the highest degree improbable that if Columbus had read the passage he could have understood it as bearing upon his own problem. There is, therefore, no ground for the

It is not probable that Columbus knew of Adam of Bremen's allusion to Vinland,

or that he would have understood it if he had read it.

[1] "Det er derfor sikkert, at Columbus ikke, som nogle har formodet, kan have kjendt Adam af Bremens Beretning om Vinland; vi kan gjerne tilføie, at havde Columbus kjendt den, vilde den ikke have kunnet vise ham Vei til Vesten (Indien), men kanske til Nordpolen." *Aarbøger for Nordisk Oldkyndighed*, 1887, ii. 2, p. 301.

[2] See above, p. 210.

assumption that Columbus went to Iceland in order to make inquiries about Vinland.

It may be argued that even if he did not go for such a purpose, nevertheless when once there he could hardly have failed incidentally to get the information. This, however, is not at all clear. Observe that our sole authority for the journey to Iceland is the passage above quoted at second-hand from Columbus himself; and there is nothing in it to show whether he staid a few hours or several weeks ashore, or met with any one likely to be possessed of the knowledge in question. The absence of any reference to Vinland in the Zeno narrative is an indication that the memory of it had faded away before 1400, and it was not distinctly and generally revived until the time of Torfæus in 1705.[1]

It is doubtful if Columbus would have stumbled upon the story in Iceland.

[1] In 1689 the Swedish writer, Ole Rudbeck, could not understand Adam of Bremen's allusion to Vinland. The passage is instructive. Rudbeck declares that in speaking of a wine-growing country near to the Arctic ocean, Adam must have been misled by some poetical or figurative phrase; he was deceived either by his trust in the Danes, or by his own credulity, for he manifestly refers to *Finland*, for which the form *Vinland* does not once occur in Sturleson, etc.: — "Ne tamen poetis solis hoc loquendi genus in suis regionum laudationibus familiare fuisse quis existimet, sacras adeat literas quæ Palæstinæ fæcunditatem appellatione *fluentorum lactis & mellis* designant. Tale aliquid, sine omne dubio, Adamo Bremensi quondam persuaserat insulam esse in ultimo septentrione sitam, mari glaciali vicinam, vini feracem, & ea propter fide tamen Danorum, *Vinlandiam* dictam prout ipse . . . fateri non dubitat. Sed deceptum eum hac sive Danorum fide, sive credulitate sua planum facit affine isti vocabulum *Finlandiæ* provinciæ ad Regnum nostrum pertinentis, pro quo apud Snorronem & in Hist. Regum non semel occurrit *Vinlandiæ* nomen, cujus promontorium ad ultimum septentrionem & usque ad mare glaciale sese extendit." Rudbeck, *Atland eller Manheim*, Upsala, cir. 1689, p. 291.

But to hear about Vinland was one thing, to be guided by it to Japan was quite another affair. It was not the mention of timber and peltries and Skrælings that would fire the imagination of Columbus; his dreams were of stately cities with busy wharves where ships were laden with silks and jewels, and of Oriental magnates decked out with "barbaric pearl and gold," dwelling in pavilions of marble and jasper amid flowery gardens in "a summer fanned with spice." The mention of Vinland was no more likely to excite Columbus's attention than that of St. Brandan's isle or other places supposed to lie in the western ocean. He was after higher game.

If he had heard it, he would probably have classed it with such tales as that of St. Brandan's isle.

To suppose that Columbus, even had he got hold of the Saga of Eric the Red and conned it from beginning to end, with a learned interpreter at his elbow, could have gained from it a knowledge of the width of the Atlantic ocean, is simply preposterous. It would be impossible to extract any such knowledge from that document to-day without the aid of our modern maps. The most diligent critical study of all the Icelandic sources of information, with all the resources of modern scholarship, enables us with some confidence to place Vinland somewhere between Cape Breton and Point Judith, that is to say, somewhere between two points distant from each other more than four degrees in latitude and more than eleven degrees in longitude! When we have got thus far, knowing as we do that the coast in question be

He could not have obtained from such a source his opinion of the width of the ocean.

longs to the same continental system as the West Indies, we can look at our map and pick up our pair of compasses and measure the width of the ocean at the twenty-eighth parallel. But it is not the mediæval document, but our modern map that guides us to this knowledge. And yet it is innocently assumed that Columbus, without any knowledge or suspicion of the existence of America, and from such vague data concerning voyages made five hundred years before his time, by men who had no means of reckoning latitude and longitude, could have obtained his figure of 2,500 miles for the voyage from the Canaries to Japan![1] The fallacy here is that which underlies the whole Scandinavian hypothesis and many other fanciful geo-

[1] The source of such a confusion of ideas is probably the ridiculous map in Rafn's *Antiquitates Americanæ*, upon which North America is represented in all the accuracy of outline attainable by modern maps, and then the Icelandic names are put on where Rafn thought they ought to go, i. e. Markland upon Nova Scotia, Vinland upon New England, etc. Any person using such a map is liable to forget that it cannot possibly represent the crude notions of locality to which the reports of the Norse voyages must have given rise in an ignorant age. (The reader will find the map reproduced in Winsor, *Narr. and Crit. Hist.*, i. 95.) Rafn's fault was, however, no greater than that committed by the modern makers of so-called "ancient atlases" — still current and in use in schools — when, for example, they take a correct modern map of Europe, with parts of Africa and Asia, and upon countries so dimly known to the ancients as Scandinavia and Hindustan, but now drawn with perfect accuracy, they simply print the ancient names!! Nothing but confusion can come from using such wretched maps. The only safe way to study the history of geography is to reproduce the ancient maps themselves, as I have done in the present work. Many of the maps given below in the second volume will illustrate the slow and painful growth of the knowledge of the North American coast during the two centuries after Columbus.

graphical speculations. It is the fallacy of projecting our present knowledge into the past.

We have next to inquire, if Columbus had heard of Vinland and comprehended its relation to his own theory about land at the west, why in the world should he have concealed this valuable knowledge? The notion seems to be that he must have kept it secret through an unworthy desire to claim a priority in discovery to which he knew that he was not entitled.[1] This is projecting our present knowledge into the past with a vengeance. Columbus never professed to have discovered America; he died in the belief that what he had done was to reach the eastern shores of Asia by a shorter route than the Portuguese. If he had reason to suppose that the Northmen had once come down from the Arctic seas to some unknown part of the Asiatic coast, he had no motive for concealing such a fact, but the strongest of motives for proclaiming it, inasmuch as it would have given him the kind of inductive argument which he sorely needed. The chief obstacle for Columbus was that for want of tangible evidence he was obliged to appeal to men's reason with scientific arguments. When you show things to young children they are not content with looking; they crave a more intimate acquaintance than the eyes alone can give, and so they reach out and

If he had known and understood the Vinland story, he had the strongest motives for proclaiming it and no motive for concealing it.

[1] "The fault that we find with Columbus is, that he was not honest and frank enough to tell where and how he had obtained his previous information about the lands which he pretended to discover." Andersen, *America not discovered by Columbus*, p. 90.

handle the things. So when ideas are presented to grown-up men, they are apt to be unwilling to trust to the eye of reason until it has been supplemented by the eye of sense; and indeed in most affairs of life such caution is wholesome. The difference between Columbus and many of the "practical" men whom he sought to convince was that he could see with his mind's eye solid land beyond the Sea of Darkness while they could not. To them the ocean, like the sky, had nothing beyond, unless it might be the supernatural world.[1] For while the argument from the earth's rotundity was intelligible enough, there were few to whom, as to Toscanelli, it was a living truth. Even of those who admitted, in theory, that Cathay lay to the west of Europe, most deemed the distance untraversable. Inductive proof of the existence of accessible land to the west was thus what Columbus chiefly needed, and what he sought every opportunity to find and produce; but it was not easy to find anything more substantial than sailors' vague mention of driftwood of foreign aspect or other outlandish jetsam washed up on the Portuguese strand.[2] What a

[1] See below, p. 398, note.

[2] For example, the pilot Martin Vicenti told Columbus that 1,200 miles west of Cape St. Vincent he had picked up from the sea a piece of carved wood evidently not carved with iron tools. Pedro Correa, who had married Columbus's wife's sister, had seen upon Porto Santo a similar piece of carving that had drifted from the west. Huge reeds sometimes floated ashore upon those islands, and had not Ptolemy mentioned enormous reeds as growing in eastern Asia? Pine-trees of strange species were driven by west winds upon the coast of Fayal, and two corpses of men of an unknown race had been washed ashore upon the neighbouring island of Flores. Certain sailors, on a voyage from the Azores to Ireland,

godsend it would have been for Columbus if he could have had the Vinland business to hurl at the heads of his adversaries! If he could have said, "Five hundred years ago some Icelanders coasted westward in the polar regions, and then coasted southward until they reached a country beyond the ocean and about opposite to France or Portugal; therefore that country must be Asia, and I can reach it by striking boldly across the ocean, which will obviously be shorter than going down by Guinea," — if he could have said this, he would have had precisely the unanswerable argument for lack of which his case was waiting and suffering. In persuading men to furnish hard cash for his commercial enterprise, as Colonel Higginson so neatly says, "an ounce of Vinland would have been worth a pound of cosmography."[1] We may be sure that the silence of Columbus about the Norse voyages proves that he knew nothing about them or quite failed to see their bearings upon his own undertaking. It seems to me absolutely decisive.

Furthermore, this silence is in harmony with the fact that in none of his four voyages across the Atlantic did Columbus betray any consciousness that there was anything for him to gain by steering toward the northwest. If he could correctly have conceived the position of Vinland he surely would not have conceived it as south of the for-

had caught glimpses of land on the west, and believed it to be the coast of "Tartary;" etc., etc. See *Vita dell' Ammiraglio*, cap. ix. Since he cited these sailors, why did he not cite the Northmen also, if he knew what they had done?

[1] *Larger History of the United States*, p. 54.

tieth parallel. On his first voyage he steered due west in latitude 28° because Toscanelli placed Japan opposite the Canaries. When at length some doubts began to arise and he altered his course, as we shall hereafter see, the change was toward the southwest. His first two voyages did not reveal to him the golden cities for which he was looking, and when on his third and fourth voyages he tried a different course it was farther toward the equator, not farther away from it, that he turned his prows. Not the slightest trace of a thought of Vinland appears in anything that he did.

No trace of a thought of Vinland appears in the voyages of Columbus.

Finally it may be asked, if the memory of Vinland was such a living thing in Iceland in 1477 that a visitor would be likely to be told about it, why was it not sufficiently alive in 1493 to call forth a protest from the North? When the pope, as we shall presently see, was proclaiming to the world that the Spanish crown was entitled to all heathen lands and islands already discovered or to be discovered in the ocean west of the Azores, why did not some zealous Scandinavian at once jump up and cry out, "Look here, old Columbus, *we* discovered that western route, you know! Stop thief!" Why was it necessary to wait more than a hundred years longer before the affair of Vinland was mentioned in this connection?

Why did not Norway or Iceland utter a protest in 1493?

Simply because it was not until the seventeenth century that the knowledge of North American geography had reached such a stage of completeness as to suggest to anybody the true significance

of the old voyages from Greenland. That significance could not have been understood by Leif and Thorfinn themselves, or by the compilers of Hauksbók and Flateyar-bók, or by any human being, until about the time of Henry Hudson. Not earlier than that time should we expect to find it mentioned, and it is just then, in 1610, that we do find it mentioned by Arngrim Jonsson, who calls Vinland "an island of *America*, in the region of Greenland, perhaps the modern Estotilandia."[1] This is the earliest glimmering of an association of the idea of Vinland with that of America.

The idea of Vinland was not associated with the idea of America until the seventeenth century.

[1] "Terram verò Landa Rolfoni quæsitam existimarem esse Vinlandiam olim Islandis sic dictam; de qua alibi insulam nempe Americæ e regione Gronlandiæ, quæ fortè hodie Estotilandia," etc. *Crymogœa*, Hamburg, 1610, p. 120.

Abraham Ortelius in 1606 speaks of the Northmen coming to America, but bases his opinion upon the Zeno narrative (published in 1558) and upon the sound of the name *Norumbega*, and apparently knows nothing of Vinland: — "Iosephus Acosta in his booke *De Natura noui orbis* indeuors by many reasons to proue, that this part of *America* was originally inhabited by certaine Indians, forced thither by tempestuous weather ouer the South sea which now they call Mare del Zur. But to me it seemes more probable, out of the historie of the two Zeni, gentlemen of Venice, . . . that this New World many ages past was entred upon by some islanders of *Europe*, as namely of *Grœnland*, Island, and Frisland; being much neerer thereunto than the Indians, nor disioyned thence . . . by an Ocean so huge, and to the Indians so vnnauigable. Also, what else may we coniecture to be signified by this *Norumbega* [the name of a North region of *America*] but that from *Norway*, signifying a North land, some Colonie in times past hath hither beene transplanted?" *Theatre of the Whole World*, London, 1606, p. 5. These passages are quoted and discussed by Reeves, *The Finding of Wineland the Good*, pp. 95, 96. The supposed connection of *Norumbega* with *Norway* is very doubtful. Possibly Stephanius, in his map of 1570 (Torfæus, *Gronlandia antiqua*, 1706), may have had reference to Labrador or the north of Newfoundland.

The genesis of the grand scheme of Columbus has now been set forth, I believe, with sufficient fulness. The cardinal facts are 1, that the need for some such scheme was suggested in 1471, by the discovery that the Guinea coast extended south of the equator; 2, that by 1474 advice had been sought from Toscanelli by the king of Portugal, and not very long after 1474 by Columbus; 3, that upon Toscanelli's letters and map, amended by the Ptolemaic estimate of the earth's size and by the authority of passages quoted in the book of Alliacus (one of which was a verse from the Apocrypha), Columbus based his firm conviction of the feasibleness of the western route. How or by whom the suggestion of that route was first made — whether by Columbus himself or by Toscanelli or by Fernando Martinez or, as Antonio Gallo declares, by Bartholomew Columbus,[1] or by some person in Portugal whose name we know not — it would be difficult to decide. Neither can we fix the date when Columbus first sought aid for his scheme from the Portuguese government. There seems to be no good reason why he should not have been talking about it before 1474; but the affair did not come to any kind of a climax until after his return from Guinea, some time after 1482 and certainly not later than 1484. It was on some accounts a favourable time. The war with Castile was out of the way, and Martin Behaim had just invented an improved astrolabe which

Résumé of the genesis of Columbus's scheme.

Martin Behaim's improved astrolabe.

[1] Gallo, *De navigatione Columbi*, apud Muratori, *Rerum Italicarum Scriptores*, tom. xxiii. col. 302.

made it ever so much easier to find and keep one's latitude at sea. It was in 1484 that Portuguese discoveries took a fresh start after a ten years' lull, and Diego Cam, with the learned Behaim and his bran-new astrolabe on board, was about to sail a thousand miles farther south than white men had ever gone before. About this time the scheme of Columbus was formally referred by King John II. to the junto of learned cosmographers from whom the crown had been wont to seek advice. The project was condemned as "visionary," [1] as indeed it was, — the outcome of vision that saw farther than those men could see. But the king, who had some of his uncle Prince Henry's love for bold enterprises, was more hospitably inclined toward the ideas of Columbus, and he summoned a council of the most learned men in the kingdom to discuss the question.[2] In this council the new scheme found some defenders, while others correctly urged that Columbus must be wrong in supposing Asia to extend so far to the east, and it must be a much longer voyage than he supposed to Cipango and Cathay.[3] Others

Negotiations of Columbus with John II. of Portugal.

[1] Lafuente, *Historia de España*, tom. ix. p. 428.

[2] Vasconcellos, *Vida del rey Don Juan II.*, lib. iv.; La Clède, *Histoire de Portugal*, lib. xiii.

[3] The Portuguese have never been able to forgive Columbus for discovering a new world for Spain, and their chagrin sometimes vents itself in amusing ways. After all, says Cordeiro, Columbus was no such great man as some people think, for he did not discover what he promised to discover; and, moreover, the Portuguese geographers were right in condemning his scheme, because it really is not so far by sea from Lisbon around Africa to Hindustan as from Lisbon by any practicable route westward to Japan! See Luciano Cordeiro, *De la part prise par les Portugais*

argued that the late war had impoverished the country, and that the enterprises on the African coast were all that the treasury could afford. Here the demands of Columbus were of themselves an obstacle to his success. He never at any time held himself cheap,[1] and the rewards and honours for which he insisted on stipulating were greater than the king of Portugal felt inclined to bestow upon a plain Genoese mariner. It was felt that if the enterprise should prove a failure, as very likely it would, the less heartily the government should have committed itself to it beforehand, the less it would expose itself to ridicule. King John was not in general disposed toward unfair and dishonest dealings, but on this occasion, after much parley, he was persuaded to sanction a proceeding

dans la découverte d'Amérique, Lisbon, 1876, pp. 23, 24, 29, 30. Well, I don't know that there is any answer to be made to this argument. Logic is logic, says the wise Autocrat: —

> "End of the wonderful one-hoss shay,
> Logic is logic, that 's all I say."

Cordeiro's book is elaborately criticised in the learned work of Prospero Peragallo, *Cristoforo Colombo in Portogallo: studi critici*, Genoa, 1882.

[1] "Perciocchè essendo l' Ammiraglio di generosi ed alti pensieri, volle capitolare con suo grande onore e vantaggio, per lasciar la memoria sua, e la grandezza della sua casa, conforme alla grandezza delle sue opere e de' suoi meriti." *Vita dell' Ammiraglio*, cap. xi. The jealous Portuguese historian speaks in a somewhat different tone from the affectionate son: — "Veó requerer á el rey Dom João que le desse algums navios pera ir á descobrir a ilha de Gypango [*sic*] per esta mar occidental. . . . El rey, porque via ser este Christovão Colom homem falador e glorioso em mostrar suas habilidades, e mas fantastico et de imaginacão com sua ilha de Cypango, que certo no que dezia: davalhe pouco credito." Barros, *Decada primeira da Asia*, Lisbon, 1752, liv. iii. cap. xi. fol. 56.

quite unworthy of him. Having obtained Columbus's sailing plans, he sent out a ship secretly, to carry some goods to the Cape Verde islands, and then to try the experiment of the westward voyage. If there should turn out to be anything profitable in the scheme, this would be safer and more frugal than to meet the exorbitant demands of this ambitious foreigner. So it was done; but the pilots, having no grand idea to urge them forward, lost heart before the stupendous expanse of waters that confronted them, and beat an ignominious retreat to Lisbon; whereupon Columbus, having been informed of the trick,[1] departed in high dudgeon, to lay his proposals before the crown of Castile. He seems to have gone rather suddenly,

A shabby trick.

Columbus leaves Portugal,

[1] It has been urged in the king's defence that "such a proceeding was not an instance of bad faith or perfidy (!) but rather of the policy customary at that time, which consisted in distrusting everything that was foreign, and in promoting by whatever means the national glory." Yes, indeed, whether the means were fair or foul. Of course it was a common enough policy, but it was lying and cheating all the same. "Não foi sem duvida por mà fè ou perfidia que tacitamente se mandon armar hum navio à cujo capitão se confiou o plano que Colombo havia proposto, e cuja execuçao se lhe encarregou; mas sim por seguir a politica naquelle tempo usada, que toda consistia em olhar com desconfiança para tudo o que era estrangeiro, e en promover por todos os modos a gloria nacional. O capitão nomeado para a empreza, como não tivesse nem o espirito, nem a convicção de Colombo, depois de huma curta viagem nos mares do Oeste, fez-se na volta da terra: e arribou à Lisboa descontente e desanimado." Campe, *Historia do descobrimento da America*, Paris, 1836, tom. i. p. 13. The frightened sailors protested that YOU MIGHT AS WELL EXPECT TO FIND LAND IN THE SKY AS IN THAT WASTE OF WATERS! See Las Casas, *Hist. de las Indias*, tom. i. p. 221. Las Casas calls the king's conduct by its right name, *dobladura*, "trickery."

leaving his wife, who died shortly after, and one or two children who must also have died, for he tells us that he never saw them again. But his son Diego, aged perhaps four or five years, he took with him as far as the town of Huelva, near the little port of Palos in Andalusia, where he left him with one of his wife's sisters, who had married a man of that town named Muliar.[1] This arrival in Spain was probably late in the autumn of 1484, and Columbus seems to have entered into the service of Ferdinand and Isabella January 20, 1486. What he was doing in the interval of rather more than a year is not known. There is a very doubtful tradition

and enters the service of the Spanish sovereigns, 1486.

[1] It has generally been supposed, on the authority of *Vita dell' Ammiraglio*, cap. xi., that his wife had lately died; but an autograph letter of Columbus, in the possession of his lineal descendant and representative the present Duke of Veraguas, proves that this is a mistake. In this letter Columbus says expressly that when he left Portugal he left wife and children, and never saw them again. (Navarrete, *Coleccion*, tom. ii. doc. cxxxvii. p. 255.) As Las Casas, who knew Diego so well, also supposed his mother to have died before his father left Portugal, it is most likely that she died soon afterwards. Ferdinand Columbus says that Diego was left in charge of some friars at the convent of La Rábida near Palos (*loc. cit.*); Las Casas is not quite so sure; he thinks Diego was left with some friend of his father at Palos, or perhaps (*por ventura*) at La Rábida. (*Historia*, tom. i. p. 227.) These mistakes were easy to make, for both La Rábida and Huelva were close by Palos, and we know that Diego's aunt Muliar was living at Huelva. (Las Casas, *op. cit.* tom. i. p. 241; Harrisse, tom. i. pp. 279, 356, 391; tom. ii. p. 229.) It is pretty clear that Columbus never visited La Rábida before the autumn of 1491 (see below, p. 412). My own notion is that Columbus may have left his wife with an infant and perhaps one older child, relieving her of the care of Diego by taking him to his aunt, and intending as soon as practicable to reunite the family. He clearly did not know at the outset whether he should stay in Spain or not.

that he tried to interest the republic of Genoa in his enterprise,[1] and a still more doubtful rumour that he afterwards made proposals to the Venetian senate.[2] If these things ever happened, there was time enough for them in this year, and they can hardly be assigned to any later period. In 1486 we find Columbus at Cordova, where the sovereigns were holding court. He was unable to effect anything until he had gained the ear of Isabella's finance minister Alonso de Quintanilla, who had a mind hospitable to large ideas. The two sovereigns had scarcely time to attend to such things, for there was a third king in Spain, the Moor at Granada, whom there now seemed a fair prospect of driving to Africa, and thus ending the struggle that had lasted with few intermissions for nearly eight centuries. The final war with Granada had been going on since the end of 1481, and considering how it weighed upon the minds of Ferdinand and Isabella it is rather remarkable that cosmography got any hearing at all. The affair was referred to the queen's confessor Fernando de Talavera, whose first impression was that if what Columbus said was true, it was very strange that other geographers should have failed to know all about it long ago. Ideas of evolution had not yet begun to exist in those days, and it was thought that what the ancients did not know was not worth

[1] It rests upon an improbable statement of Ramusio, who places the event as early as 1470. The first Genoese writer to allude to it is Casoni, *Annali della Republica di Genova*, Genoa, 1708, pp. 26–31. Such testimony is of small value.

[2] First mentioned in 1800 by Marin, *Storia del commercio de' Veneziani*, Venice, 1798–1808, tom. vii. p. 236.

knowing. Toward the end of 1486 the Spanish sovereigns were at Salamanca, and Talavera referred the question to a junto of learned men, including professors of the famous university.[1] There was no lack of taunt and ridicule, and a whole arsenal of texts from Scripture and the Fathers were discharged at Columbus, but it is noticeable that quite a number were inclined to think that his scheme might be worth trying, and that some of his most firmly convinced supporters were priests. No decision had been reached when the sovereigns started on the Malaga campaign in the spring of 1487.

The junto at Salamanca.

After the surrender of Malaga in August, 1487, Columbus visited the court in that city. For a year or more after that time silken chains seem to have bound him to Cordova. He had formed a connection with a lady of noble family, Beatriz Enriquez de Arana, who gave birth to his son Ferdinand on the 15th of August, 1488.[2] Shortly after this event, Columbus made a visit to Lisbon, in all probability for

Birth of Ferdinand Columbus, Aug. 15, 1488.

[1] The description usually given of this conference rests upon the authority of Remesal, *Historia de la prouincia de Chyapa*, Madrid, 1619, lib. ii. cap. vii. p. 52. Las Casas merely says that the question was referred to certain persons at the court, *Hist. de las Indias*, tom. i. p. 228. It is probably not true that the project of Columbus was officially condemned by the university of Salamanca as a corporate body. See Camara, *Religion y Ciencia*, Valladolid, 1880, p. 261.

[2] Some historians, unwilling to admit any blemishes in the character of Columbus, have supposed that this union was sanctioned by marriage, but this is not probable. He seems to have been tenderly attached to Beatriz, who survived him many years. See Harrisse, tom. ii. pp. 353–357.

the purpose of meeting his brother Bartholomew, who had returned in the last week of December, 1487, in the Dias expedition, with the proud news of the discovery of the Cape of Good Hope,[1] which was

Bartholomew Columbus returns from the Cape of Good Hope, Dec., 1487.

[1] The authority for Bartholomew Columbus having sailed to the Cape of Good Hope with Dias is a manuscript note of his own in Christopher's copy of the *Imago Mundi*: "Nota quod hoc anno de 88 [it should be 87] in mense decembri appulit in Ulixbona Bartholomeus Didacus capitaneus trium carabelarum quem miserat serenissimus rex Portugalie in Guineam ad tentandum terram. Et renunciavit ipse serenissimo regi prout navigaverat ultra jam navigata leuchas 600, videlicet 450 ad austrum et 150 ad aquilonem usque montem per ipsum nominatum *Cabo de boa esperança* quem in Agesimba estimamus. Qui quidem in eo loco invenit se distare per astrolabium ultra lineam equinoctialem gradus 35. Quem viagium pictavit et scripsit de leucha in leucham in una carta navigationis ut oculi visum ostenderet ipso serenissimo regi. In quibus omnibus interfui." M. Varnhagen has examined this note and thinks it is in the handwriting of Christopher Columbus (*Bulletin de Géographie*, janvier, 1858, tom. xv. p. 71); and M. d'Avezac (*Canevas chronologique*, p. 58), accepting this opinion, thinks that the words *in quibus omnibus interfui*, "in all of which I took part," only mean that Christopher was present in Lisbon when the expedition returned, and heard the whole story! With all possible respect for such great scholars as MM. d'Avezac and Varnhagen, I submit that the opinion of Las Casas, who first called attention to this note, must be much better than theirs on such a point as the handwriting of the two brothers. When Las Casas found the note he wondered whether it was meant for Bartholomew or Christopher, i. e. wondered which of the two was meant to be described as having "taken part;" but at all events, says Las Casas, the handwriting is Bartholomew's:— "Estas son palabras escritas de la mano de Bartolomé Colon, no sé si las escribió de sí ó de su letra por su hermano Cristóbal Colon." Under these circumstances it seems idle to suppose that Las Casas could have been mistaken about the handwriting; he evidently put his mind on that point, and in the next breath he goes on to say, "la letra yo conozco ser de Bartolomé Colon, porque tuve muchas suyas," i. e. "I know it is Bartholomew's writing, for I have had many letters of his;" and again "estas

rightly believed to be the extremity of Africa; and we can well understand how Christopher, on seeing the success of Prince Henry's method of reaching the Indies so nearly vindicated, must have become more impatient than ever to prove the superiority of his own method. It was probably not long

palabras . . . de la misma letra y mano de Bartolomé Colon, la cual muy bien conocí y agora tengo hartas cartas y letras suyas, tratando deste viaje," i. e. "these words . . . from the very writing and hand of Bartholomew Columbus, which I knew very well, and I have to-day many charts and letters of his, treating of this voyage." (*Hist. de las Indias*, tom. i. pp. 213, 214.) This last sentence makes Las Casas an independent witness to Bartholomew's presence in the expedition, a matter about which he was not likely to be mistaken. What puzzled him was the question, not whether Bartholomew went, but whether Christopher could have gone also, "pudo ser tambien que se hallase Cristóbal Colon." Now Christopher certainly did not go on that voyage. The expedition started in August, 1486, and returned to Lisbon in December, 1487, after an absence of sixteen months and seventeen days, "auendo dezaseis meses et dezasete dias que erão partidos delle." (Barros, *Decada primeira da Asia*, Lisbon, 1752, tom. i. fol. 42, 44.) The account-book of the treasury of Castile shows that sums of money were paid to Christopher at Seville, May 5, July 3, August 27, and October 15, 1487; so that he could not have gone with Dias (see Harrisse, tom. ii. p. 191). Neither could Christopher have been in Lisbon in December, 1487, when the little fleet returned, for his safe-conduct from King John is dated March 20, 1488. It was not until the autumn of 1488 that Columbus made this visit to Portugal, and M. d'Avezac has got the return of the fleet a year too late. Bartholomew's note followed a custom which made 1488 begin at Christmas, 1487.

In reading a later chapter of Las Casas for another purpose (tom. i. p. 227), I come again upon this point. He rightly concludes that Christopher could not have gone with Dias, and again declares most positively that the handwriting of the note was Bartholomew's and not Christopher's.

This footnote affords a good illustration of the kind of difficulties that surround such a subject as the life of Columbus, and the ease with which an excess of ingenuity may discover mare's nests.

after Bartholomew's return that Christopher determined to go and see him, for he applied to King John II. for a kind of safe-conduct, which was duly granted March 20, 1488. This document[1] guarantees Christopher against arrest or arraignment or detention on any charge civil or criminal whatever, during his stay in Portugal, and commands all magistrates in that kingdom to respect it. From this it would seem probable that in the eagerness of his geographical speculations he had neglected his business affairs and left debts behind him in Portugal for which he was liable to be arrested. The king's readiness to grant the desired privilege seems to indicate that he may have cherished a hope of regaining the services of this accomplished chart-maker and mariner. Christopher did not avail himself of the privilege until late in the summer,[2] and it is only fair to suppose that he waited for the birth of his child and some assurance of its mother's safety. On meeting Bartholomew he evidently set him to work forthwith in making overtures to the courts of England and France. It was natural enough that Bartholomew should first set out for Bristol, where old shipmates and acquaintances were sure to be found. It appears that on the way he was captured by pirates, and thus some delay was occasioned before he arrived in London

Christopher visits Bartholomew at Lisbon, cir. Sept., 1488;

and sends him to England.

[1] It may be found in Navarrete, *Coleccion de viages*, tom. ii. pp. 5, 6.

[2] The account-book of the treasury shows that on June 16 he was still in Spain. See Harrisse, tom. i. p. 355.

and showed the king a map, probably similar to Toscanelli's and embellished with quaint Latin verses. An entry on this map informs us that it was made by Bartholomew Columbus in London, February 10, 1488, which I think should be read 1489 or even 1490, so we may suppose it to have been about that time or perhaps later that he approached the throne.[1] Henry VII. was intelligent enough

Bartholomew, after mishaps, reaches England cir. Feb., 1490;

[1] The entry, as given by Las Casas, is "Pro authore, seu pictore, | Genuua cui patria est, nomen cui Bartolomeus | Columbus de terra rubea, opus edidit istud || Londonijs: anno domini millesimo quatercentessimo octiesque uno || Atque insuper anno octavo: decimaque die mensis Februarii. || Laudes Christo cantentur abunde." *Historia*, tom. i. p. 225. Now since Bartholomew Columbus was a fairly educated man, writing this note in England on a map made for the eyes of the king of England, I suppose he used the old English style which made the year begin at the vernal equinox instead of Christmas, so that his February, 1488, means the next month but one after December, 1488, i. e. what in our new style becomes February, 1489. Bartholomew returned to Lisbon from Africa in the last week of December, 1487, and it is not likely that his plans could have been matured and himself settled down in London in less than seven weeks. The logical relation of the events, too, shows plainly that Christopher's visit to Lisbon was for the purpose of consulting his brother and getting first-hand information about the greatest voyage the world had ever seen. In the early weeks of 1488 Christopher sends his request for a safe-conduct, gets it March 20, waits till his child is born, August 15, and then presently goes. Bartholomew may have sailed by the first of October for England, where (according to this reading of his date) we actually find him four months later. What happened to him in this interval? Here we come to the story of the pirates. M. Harrisse, who never loses an opportunity for throwing discredit upon the *Vita dell' Ammiraglio*, has failed to make the correction of date which I have here suggested. He puts Bartholomew in London in February, 1488, and is thus unable to assign any reason for Christopher's visit to Lisbon. He also finds that in the forty-six days between Christmas, 1487, and February, 10, 1488, there is hardly room enough for any delay

to see the bearings of Bartholomew's arguments, and at the same time, as a good man of business,

due to so grave a cause as capture by pirates. (*Christophe Colomb*, vol. ii. p. 192.) He therefore concludes that the statement in the *Vita dell' Ammiraglio*, cap. xi., is unworthy of credit, and it is upon an accumulation of small difficulties like this that he bases his opinion that Ferdinand Columbus cannot have written that book. But Las Casas also gives the story of the pirates, and adds the information that they were "Easterlings," though he cannot say of what nation, i. e. whether Dutch, German, or perhaps Danes. He says that Bartholomew was stripped of his money and fell sick, and after his recovery was obliged to earn money by map-making before he could get to England. (*Historia*, tom. i. p. 225.) Could all this have happened within the four months which I have allowed between October, 1488, and February, 1489? Voyages before the invention of steamboats were of very uncertain duration. John Adams in 1784 was fifty-four days in getting from London to Amsterdam (see my *Critical Period of American History*, p. 156). But with favourable weather a Portuguese caravel in 1488 ought to have run from Lisbon to Bristol in fourteen days or less, so that in four months there would be time enough for quite a chapter of accidents. Las Casas, however, says it was *a long time* before Bartholomew was able to reach England: — "Esto fué causa que enfermase y viniese á mucha pobreza, y estuviese mucho tempo sin poder llegar á Inglaterra, hasta tanto que quiso Dios sanarle; y reformado algo, por su industria y trabajos de sus manos, haciendo cartas de marear, llegó á Inglaterra, y, pasados un dia y otros, hobo de alcanzar que le oyese Enrique VII." It is impossible, I think, to read this passage without feeling that at least a year must have been consumed; and I do not think we are entitled to disregard the words of Las Casas in such a matter. But how shall we get the time?

Is it possible that Las Casas made a slight mistake in deciphering the date on Bartholomew's map? Either that mariner did not give the map to Henry VII., or the king gave it back, or more likely it was made in duplicate. At any rate Las Casas had it, along with his many other Columbus documents, and for aught we know it may still be tumbling about somewhere in the Spanish archives. It was so badly written (*de muy mala é corrupta letra*), apparently in abbreviations (*sin ortografía*), that Las Casas says he found extreme difficulty in making it out. Now let us observe that date, which is given in fantastic style, apparently because the

he was likely to be cautious about investing money in remote or doubtful enterprises. What arguments were used we do not know, but the spring of 1492 had arrived before any decisive answer had been given. Meanwhile Bartholomew had made his way to France, and found a powerful protector in a certain Madame de Bourbon,[1] while he made maps for

and goes thence to France before 1492.

inscription is in a rude doggerel, and the writer seems to have wished to keep his "verses" tolerably even. (They don't scan much better than Walt Whitman's.) As it stands, the date reads *anno domini millesimo quatercentessimo octiesque uno atque insuper anno octavo*, i. e. "in the year of our Lord the thousandth, four hundredth, AND EIGHT-TIMES-ONE, and thereafter the eighth year." What business has this cardinal number *octiesque uno* in a row of ordinals? If it were translatable, which it is not, it would give us $1{,}000 + 400 + 8 + 8 = 1416$, an absurd date. The most obvious way to make the passage readable is to insert the ordinal *octogesimo primo* instead of the incongruous *octiesque uno*; then it will read "in the year of our Lord the one-thousand-four-hundred-and-eighty-first, and thereafter the eighth year," that is to say 1489. Now translate old style into new style, and February, 1489, becomes February, 1490, which I believe to be the correct date. This allows sixteen months for Bartholomew's mishaps; it justifies the statement in which Las Casas confirms Ferdinand Columbus; and it harmonizes with the statement of Lord Bacon: "For Christopherus Columbus, refused by the king of Portugal (who would not embrace at once both east and west), employed his brother Bartholomew Columbus unto King Henry to negotiate for his discovery. And it so fortuned that he was taken by pirates at sea; by which accidental impediment he was long ere he came to the king; so long that before he had obtained a capitulation with the king for his brother the enterprise was achieved, and so the West Indies by Providence were then reserved for the crown of Castilia." *Historie of the Raygne of K. Henry the Seventh*, Bacon's *Works*, Boston, 1860, vol. xi. p. 296. Lord Bacon may have taken the statement from Ferdinand's biography; but it probably agreed with English traditions, and ought not to be slighted in this connection.

[1] One of the sisters of Charles VIII. See Harrisse, tom. ii. p. 194.

people at the court and waited to see if there were any chances of getting help from Charles VIII.

As for Christopher Columbus, we find him back in Spain again, in May, 1489, attending court at Cordova. In the following autumn there was much suffering in Spain from floods and famine,[1] and the sovereigns were too busy with the Moorish war to give ear to Columbus. It was no time for new undertakings, and the weary suitor began to think seriously of going in person to the French court. First, however, he thought it worth while to make an attempt to get private capital enlisted in his enterprise, and in the Spain of that day such private capital meant a largess from some wealthy grandee. Accordingly about Christmas of 1489, after the Beza campaign in which Columbus is said to have fought with distinguished valour,[2] he seems to have applied to the most powerful nobleman in Spain, the Duke of Medina-Sidonia, but without success. But at the hands of Luis de la Cerda, Duke of Medina-Celi, he met with more encouragement than he had as yet found in any quarter. That nobleman entertained Columbus most hospitably at his castle at Puerto de Santa Maria for nearly two years, until the autumn of 1491. He became convinced that the scheme of Columbus was feasible, and decided to fit up two or three caravels at his own expense, if necessary, but first he thought it proper to ask the queen's consent, and to offer her another chance to take part in the

The Duke of Medina-Celi proposes to furnish the ships for Columbus,

[1] Bernaldez, *Reyes Católicos*, cap. xci.

[2] Zuñiga, *Anales de Sevilla*, lib. xii. p. 404.

enterprise.[1] Isabella was probably unwilling to have the duke come in for a large share of the profits in case the venture should prove successful. She refused the royal license, saying that she had not quite made up her mind whether to take up the affair or not, but if she should decide to do so she would be glad to have the duke take part in it.[2] Meanwhile she referred the question to Alonso de Quintanilla, comptroller of the treasury of Castile. This was in the spring of 1491, when the whole country was in a buzz of excitement with the preparations for the siege of Granada. The baffled Columbus visited the sovereigns in camp, but could not get them to attend to him, and early in the autumn, thoroughly disgusted and sick at heart, he made up his mind to shake the dust of Castile from his feet and see what could be done in France. In October or November he went to Huelva, apparently to get his son Diego, who had been left there, in charge of his aunt. It was probably his intention to take all the family he had — Beatriz

but Isabella withholds her consent.

Columbus makes up his mind to get his family together and go to France, Oct., 1491.

[1] See the letter of March 19, 1493, from the Duke of Medina-Celi to the Grand Cardinal of Spain (from the archives of Simancas) in Navarrete *Coleccion de viages*, tom. ii. p. 20.

[2] This promise was never fulfilled. When Columbus returned in triumph, arriving March 6, 1493, at Lisbon, and March 15 at Palos, the Duke of Medina-Celi wrote the letter just cited, recalling the queen's promise and asking to be allowed to send to the Indies once each year an expedition on his own account; for, he says, if he had not kept Columbus with him in 1490 and 1491 he would have gone to France, and Castile would have lost the prize. There was some force in this, but Isabella does not appear to have heeded the request.

and her infant son Ferdinand, of whom he was extremely fond, as well as Diego — and find a new home in either France or England, besides ascertaining what had become of his brother Bartholomew, from whom he had not heard a word since the latter left Portugal for England.[1]

But now at length events took a favourable turn. Fate had grown tired of fighting against such indomitable perseverance. For some years now the stately figure of Columbus had been a familiar sight in the streets of Seville and Cordova, and as he passed along, with his white hair streaming in the breeze, and countenance aglow with intensity of purpose or haggard with disappointment at some fresh rebuff, the ragged urchins of the pavement tapped their foreheads and smiled with mingled wonder and amusement at this madman. Seventeen years had elapsed since the letter from Toscanelli to Martinez, and all that was mortal of the Florentine astronomer had long since been laid in the grave. For Columbus himself old age was not far away, yet he seemed no nearer the fulfilment of his grand purpose than when he had first set it forth to the king of Portugal. We can well imagine that when he started from Huelva, with his little son Diego, now some eleven or twelve years old, again to begin renewing his suit in a strange country, his thoughts must have been sombre enough. For some reason or other — tradition says to ask for some bread and water for his boy — he stopped at the Franciscan monastery

[1] This theory of the situation is fully sustained by Las Casas, tom. i. p. 241.

of La Rábida, about half a league from Palos. The prior, Juan Perez, who had never seen Columbus before, became greatly interested in him and listened with earnest attention to his story. This worthy monk, who before 1478 had been Isabella's father-confessor, had a mind hospitable to new ideas. He sent for Garcia Fernandez, a physician of Palos, who was somewhat versed in cosmography, and for Martin Alonso Pinzon, a well-to-do ship-owner and trained mariner of that town, and in the quiet of the monastery a conference was held in which Columbus carried conviction to the minds of these new friends. Pinzon declared himself ready to embark in the enterprise in person. The venerable prior forthwith sent a letter to the queen, and received a very prompt reply summoning him to attend her in the camp before Granada. The result of the interview was that within a few days Perez returned to the convent with a purse of 20,000 maravedis (equivalent to about 1,180 dollars of the present day), out of which Columbus bought a new suit of clothes and a mule; and about the first of December he set out for the camp in company with Juan Perez, leaving the boy Diego in charge of the priest Martin Sanchez and a certain Rodriguez Cabejudo, upon whose sworn testimony, together with that of the physician Garcia Fernandez, some years afterward, several of these facts are related.[1]

He stops at La Rábida, and meets the prior Juan Perez.

Perez writes to the queen,

and Columbus is summoned back to court.

[1] My account of these proceedings at La Rábida differs in some particulars from any heretofore given, and I think gets the events

At once upon the arrival of Columbus in the camp before Granada, his case was argued then

into an order of sequence that is at once more logical and more in harmony with the sources of information than any other. The error of Ferdinand Columbus — a very easy one to commit, and not in the least damaging to his general character as biographer — lay in confusing his father's two real visits (in 1484 and 1491) to Huelva with two visits (one imaginary in 1484 and one real in 1491) to La Rábida, which was close by, between Huelva and Palos. The visits were all the more likely to get mixed up in recollection because in each case their object was little Diego and in each case he was left in charge of somebody in that neighbourhood. The confusion has been helped by another for which Ferdinand is not responsible, viz.: the friar Juan Perez has been confounded with another friar Antonio de Marchena, who Columbus says was the only person who from the time of his first arrival in Spain had always befriended him and never mocked at him. These worthy friars twain have been made into one (e. g. "the prior of the convent, Juan Perez de Marchena," Irving's *Columbus*, vol. i. p. 128), and it has often been supposed that Marchena's acquaintance began with Columbus at La Rábida in 1484, and that Diego was left at the convent at that time. But some modern sources of information have served at first to bemuddle, and then when more carefully sifted, to clear up the story. In 1508 Diego Columbus brought suit against the Spanish crown to vindicate his claim to certain territories discovered by his father, and there was a long investigation in which many witnesses were summoned and past events were busily raked over the coals. Among these witnesses were Rodriguez Cabejudo and the physician Garcia Fernandez, who gave from personal recollection a very lucid account of the affairs at La Rábida. These proceedings are printed in Navarrete, *Coleccion de viages*, tom. iii. pp. 238–591 More recently the publication of the great book of Las Casas has furnished some very significant clues, and the elaborate researches of M. Harrisse have furnished others. (See Las Casas, lib. i. cap. xxix., xxxi.; Harrisse, tom. i. pp. 341–372; tom. ii. pp. 237–231; cf. Peragallo, *L' autenticità*, etc., pp. 117–134.) — It now seems clear that Marchena, whom Columbus knew from his first arrival in Spain, was not associated with La Rábida. At that time Columbus left Diego, a mere infant, with his wife's sister at Huelva. Seven years later, intending to leave Spain forever, he went to Huelva and took Diego, then a small boy. On his way from

and there before an assembly of learned men and was received more hospitably than formerly, at Salamanca. Several eminent prelates had come to think favourably of his project or to deem it at least worth a trial. Among these were the royal confessors, Deza and Talavera, the latter having changed his mind, and especially Mendoza, archbishop of Toledo, who now threw his vast influence decisively in favour of Columbus.[1] The treasurers of the two kingdoms, moreover, Quintanilla for Castile and Luis de Santangel for Aragon, were among his most enthusiastic supporters; and the result of the conference was the queen's promise to take up the matter in earnest as soon as the Moor should have surrendered Granada.

The junto before Granada, Dec., 1491.

Huelva to the Seville road, and thence to Cordova (where he would have been joined by Beatriz and Ferdinand), he happened to pass by La Rábida, where up to that time he was evidently unknown, and to attract the attention of the prior Juan Perez, and the wheel of fortune suddenly and unexpectedly turned. As Columbus's next start was not for France, but for Granada, his boy was left in charge of two trustworthy persons. On May 8, 1492, the little Diego was appointed page to Don John, heir-apparent to the thrones of Castile and Aragon, with a stipend of 9,400 maravedis. On February 19, 1498, after the death of that young prince, Diego became page to Queen Isabella.

[1] In popular allusions to Columbus it is quite common to assume or imply that he encountered nothing but opposition from the clergy. For example the account in Draper's *Conflict between Science and Religion*, p. 161, can hardly be otherwise understood by the reader. But observe that Marchena who never mocked at Columbus, Juan Perez who gave the favourable turn to his affairs, the great prelates Deza and Mendoza, and the two treasurers Santangel and Quintanilla, were every one of them priests! Without cordial support from the clergy no such enterprise as that of Columbus could have been undertaken, in Spain at least. It is quite right that we should be free-thinkers; and it is also desirable that we should have some respect for facts.

Columbus had not long to wait for that great event, which came on the 2d of January, 1492, and was hailed with rejoicings throughout Europe as in some sort a compensation for the loss of Constantinople. It must have been with a manifold sense of triumph that Columbus saw the banner of Spain unfurled to the breeze from the highest tower of the Alhambra. But at this critical moment in his fortunes the same obstacle was encountered that long before had broken off his negotiations with the king of Portugal. With pride and self-confidence not an inch abated by all these years of trial, he demanded such honours and substantial rewards as seemed extravagant to the queen, and Talavera advised her not to grant them. Columbus insisted upon being appointed admiral of the ocean and viceroy of such heathen countries as he might discover, besides having for his own use and behoof one eighth part of such revenues and profits as might accrue from the expedition. In principle this sort of remuneration did not differ from that which the crown of Portugal had been wont to award to its eminent discoverers,[1] but in amount it was liable to prove

Surrender of Granada, Jan. 2, 1492.

Columbus negotiates with the queen.

[1] Our Scandinavian friends are fond of pointing to this demand of Columbus as an indication that he secretly expected to "discover America," and not merely to find the way to Asia. But how about Ferdinand and Isabella, who finally granted what was demanded, and their ministers who drew up the agreement, to say nothing of the clerks who engrossed it? What did they all understand by "discovering islands and continents in the ocean"? Were they all in this precious Vinland secret? If so, it was pretty well kept. But in truth there was nothing singular in these stipulations. Portugal paid for discovery in just this way

indefinitely great, enough perhaps to raise to princely power and rank this foreign adventurer. Could he not be satisfied with something less? But Columbus was as inexorable as the Sibyl with her books, and would hear of no abatement in his price. For this "great constancy and loftiness of soul,"[1] Las Casas warmly commends his friend Columbus. A querulous critic might call it unreasonable obstinacy. But in truth the good man seems to have entertained another grand scheme of his own, to which he wished to make his maritime venture contribute. It was natural that his feelings toward Turks should have been no more amiable than those of Hannibal toward the Romans. It was the Turks who had ruined the commerce of his native Genoa, in his youth he had more than once crossed swords with their corsairs, and now he looked forward to the time when he might play the part of a second Godfrey de Bouillon and deliver Jerusalem from the miscreant followers of Mahound.[2] Vast resources would be needed for

by granting governorships over islands like the Azores, or long stretches of continent like Guinea, along with a share of the revenues yielded by such places. See for example the cases of Gonzalo Cabral, Fernando Gomez, and others in Major, *Prince Henry the Navigator*, pp. 238, 321, and elsewhere. In their search for the Indies the Portuguese were continually finding new lands, and it was likely to be the same with the western route, which was supposed (see Catalan, Toscanelli, and Behaim maps) to lead among spice islands innumerable, and to Asiatic kingdoms whose heathen people had no rights of sovereignty that Christian monarchs felt bound to respect.

[1] Las Casas, *op. cit.* tom i. p. 243.

[2] See his letter of February, 1502, to Pope Alexander VI. in Navarrete, tom. ii. p. 280; and cf. Helps, *Spanish Conquest in America*, vol. i. p. 96; Roselly de Lorgues, *Christophe Colomb*, p. 394.

such work, and from Cipango with its gold-roofed temples, and the nameless and numberless isles of spices that crowded the Cathayan seas, he hoped to obtain them. Long brooding over his cherished projects, in which chimeras were thus mixed with anticipations of scientific truth, had imparted to his character a tinge of religious fanaticism. He had come to regard himself as a man with a mission to fulfil, as God's chosen instrument for enlarging the bounds of Christendom and achieving triumphs of untold magnificence for its banners. In this mood he was apt to address kings with an air of equality that ill comported with his humble origin and slender means; and on the present occasion, if Talavera felt his old doubts and suspicions reviving, and was more than half inclined to set Columbus down as a mere vendor of crotchets, one can hardly wonder.

His terms are considered exorbitant.

The negotiations were broken off, and the indomitable enthusiast once more prepared to go to France. He had actually started on his mule one fine winter day, when Luis de Santangel rushed into the queen's room and spoke to her with all the passionate and somewhat reproachful energy of one who felt that a golden opportunity was slipping away forever. His arguments were warmly seconded by Quintanilla, who had followed him into the room, as well as by the queen's bosom friend Beatriz de Bobadilla, Marchioness of Moya, who happened to be sitting on the sofa and was a devoted admirer of Columbus. An impulse seized Isabella. A courier was sent on a fleet horse, and overtook Colum-

Interposition of Luis de Santangel.

bus as he was jogging quietly over the bridge of Pinos, about six miles out from Granada. The matter was reconsidered and an arrangement was soon made. It was agreed: —

"1. That Columbus should have, for himself, during his life, and for his heirs and successors forever, the office of admiral in all the islands and continents which he might discover or acquire in the ocean, with similar honours and prerogatives to those enjoyed by the high admiral of Castile in his district.

Agreement between Columbus and the sovereigns.

"2. That he should be viceroy and governor-general over all the said lands and continents; with the privilege of nominating three candidates for the government of each island or province, one of whom should be selected by the sovereigns.

"3. That he should be entitled to reserve for himself one tenth of all pearls, precious stones, gold, silver, spices, and all other articles and merchandises, in whatever manner found, bought, bartered, or gained within his admiralty, the costs being first deducted.

"4. That he, or his lieutenant, should be the sole judge in all causes and disputes arising out of traffic between those countries and Spain, provided the high admiral of Castile had similar jurisdiction in his district.

"5. That he might then, and at all after times, contribute an eighth part of the expense in fitting out vessels to sail on this enterprise, and receive an eighth part of the profits." [1]

[1] I cite this version from Irving's *Columbus*, vol. i. p. 142, making a slight amendment in the rendering; the original text is in

Columbus was not long in finding friends to advance or promise on his account an eighth part of the sum immediately required. A considerable amount was assessed upon the town of Palos in punishment for certain misdeeds or delinquencies on the part of its people or some of them. Castile assumed the rest of the burden, though Santangel may have advanced a million maravedis out of the treasury of Aragon, or out of the funds of the *Hermandad*,[1] or perhaps more likely on his own account.[2] In any case it was a loan to the treasury of Castile simply. It was always distinctly under-

Navarrete, tom. ii. p. 7. A few days later the title of "Don" was granted to Columbus and made hereditary in his family along with the offices of viceroy and governor-general.

[1] A police organization formed in 1476 for suppressing highway robbery.

[2] It is not easy to give an accurate account of the cost of this most epoch-making voyage in all history. Conflicting statements by different authorities combine with the fluctuating values of different kinds of money to puzzle and mislead us. According to M. Harrisse 1,000,000 maravedis would be equivalent to 295,175 francs, or about 59,000 gold dollars of United States money at present values. Las Casas (tom. i. p. 256) says that the eighth part, raised by Columbus, was 500,000 maravedis (29,500 dollars). Account-books preserved in the archives of Simancas show that the sums paid from the treasury of Castile amounted to 1,146,000 maravedis (67,500 dollars). Assuming the statement of Las Casas to be correct, the amounts contributed would perhaps have been as follows: —

Queen Isabella, from Castile treasury . . .	$67,500
" loan from Santangel	59,000
Columbus	29,500
Other sources, including contribution levied upon the town of Palos	80,000
Total	$236,000

This total seems to me altogether too large for probability, and so does the last item, which is simply put at the figure necessary

stood that Ferdinand as king of Aragon had no share in the enterprise, and that the Spanish Indies were an appurtenance to the crown of Castile. The agreement was signed April 17, 1492, and with tears of joy Columbus vowed to devote every maravedi that should come to him to the rescue of the Holy Sepulchre.

When he reached Palos in May, with royal orders for ships and men, there had like to have been a riot. Terrible dismay was felt at the prospect of launching out for such a voy- Dismay at Palos.

to make the total eight times 29,500. I am inclined to suspect that Las Casas (with whom arithmetic was not always a strong point) may have got his figures wrong. The amount of Santangel's loan also depends upon the statement of Las Casas, and we do not know whether he took it from a document or from hearsay. Nor do we know whether it should be added to, or included in, the first item. More likely, I think, the latter. The only item that we know with documentary certainty is the first, so that our statement becomes modified as follows: —

Queen Isabella, from Castile treasury . . .	$67,500
" loan from Santangel	?
Columbus	?
Town of Palos	rent of two fully equipped caravels for two months, etc.
Total	?

(Cf. Harrisse, tom. i. pp. 391–404.) Unsatisfactory, but certain as far as it goes. Alas, how often historical statements are thus reduced to meagreness, after the hypothetical or ill-supported part has been sifted out! The story that the Pinzon brothers advanced to Columbus his portion is told by Las Casas, but he very shrewdly doubts it. The famous story that Isabella pledged her crown jewels (*Vita dell' Ammiraglio*, cap. xiv.) has also been doubted, but perhaps on insufficient grounds, by M. Harrisse. It is confirmed by Las Casas (tom. i. p. 249). According to one account she pledged them to Santangel in security for his loan, — which seems not altogether improbable. See Pizarro y Orellana, *Varones ilustres del Nuevo Mundo*, Madrid, 1639, p. 16.

age upon the Sea of Darkness. Groans and curses greeted the announcement of the forced contribution. But Martin Pinzon and his brothers were active in supporting the crown officials, and the work went on. To induce men to enlist, debts were forgiven and civil actions suspended. Criminals were released from jail on condition of serving. Three caravels were impressed into the service of the crown for a time unlimited; and the rent and maintenance of two of these vessels for two months was to be paid by the town.

The three famous caravels; the Santa Maria.

The largest caravel, called the Santa Maria or Capitana, belonged to Juan de La Cosa, a Biscayan mariner whose name was soon to become famous.[1] He now commanded her, with another consummate sailor, Sancho Ruiz, for his pilot. This single-decked craft, about ninety feet in length by twenty feet breadth of beam, was the Admiral's flag-ship. The second caravel, called the Pinta, a much swifter vessel, was commanded by Martin Pinzon. She belonged to two citizens of Palos, Gomez Rascon and Cristobal Quintero, who were now in her crew, sulky and ready for mischief.

The Pinta.

The third and smallest caravel, the Niña ("Baby"), had for her commander Vicente Yañez Pinzon, the youngest of the brothers, now about thirty years of age. Neither the Pinta nor the Niña was decked amidships. On board the three caravels were just ninety persons.[2] And so they

The Niña.

[1] Navarrete, *Biblioteca maritima*, tom. ii. pp. 208, 209.

[2] The accounts of the armament are well summed up and discussed in Harrisse, tom. i. pp. 405–408. Eighty-seven names, out

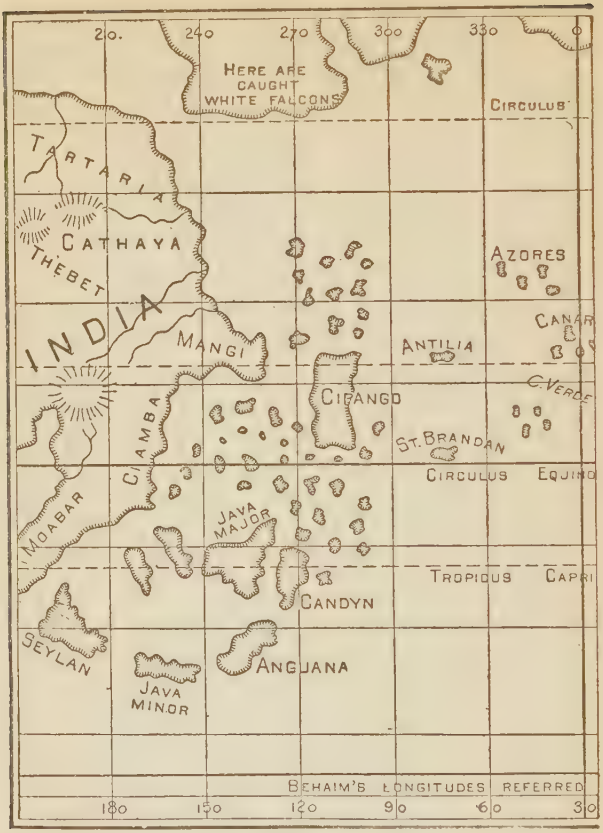
set sail from Palos on Friday, August 3, 1492, half an hour before sunrise, and by sunset had run due south five and forty geographical miles, when they shifted their course a couple of points to starboard and stood for the Canaries.

No thought of Vinland is betrayed in these proceedings. Columbus was aiming at the northern end of Cipango (Japan). Upon Toscanelli's map, which he carried with him, the great island of Cipango extends from 5° to about 28° north latitude. He evidently aimed at the northern end of Cipango as being directly on the route to Zaiton (Chang-chow) and other Chinese cities mentioned by Marco Polo. Accordingly he began by running down to the Canaries, in order that he might sail thence due west on the 28th parallel without shifting his course by a single point until he should see the coast of Japan looming up before him.[1] On this preliminary run signs of mischief began already to show themselves. The Pinta's rudder was broken and unshipped, and Columbus suspected her two angry and chafing owners of having done it on purpose, in order that they and their vessel might be left behind. The Canaries at this juncture merited the name of Fortunate Islands; fortunately they, alone among African islands, were Spanish, so that Columbus could stop there and make repairs. While this was going on the sailors

They go to the Canaries and are delayed there.

of the ninety, have been recovered, and the list is given below, Appendix C.

[1] "Para de allí tomar mi derrota, y navegar tanto que yo llegase á las Indias," he says in his journal, Navarrete, *Coleccion de viages*, tom. i. p. 3.



Martin Behaim's Globe, 1492,

[1] Martin Behaim was born at Nuremberg in 1436, and is said to have been a pupil of the celebrated astronomer, Regiomontanus, author of the first almanac published in Europe, and of Ephemerides, of priceless value to navigators. He visited Portugal about 1480, invented a new kind of astrolabe, and sailed with it in 1484 as cosmographer in Diego Cam's voyage to the Congo. On his return to Lisbon he was knighted, and presently went to live on the island of Fayal, of which his wife's father was

reduced to Mercator's projection.[1]

governor. He was a friend of Columbus. Toward 1492 he visited Nuremberg, to look after some family affairs, and while there "he gratified some of his townspeople by embodying in a globe the geographical views which prevailed in the maritime countries; and the globe was finished before Columbus had yet accomplished his voyage. The next year (1493) Behaim returned to Portugal; and after having been sent to the Low Countries on a diplomatic mission, he was captured by English cruisers and

were scared out of their wits by an eruption of Teneriffe, which they deemed an omen of evil, and it was also reported that some Portuguese caravels were hovering in those waters, with intent to capture Columbus and carry him off to Lisbon.

Columbus starts for Japan, Sept. 6, 1492.

At length, on the 6th of September, they set sail from Gomera, but were becalmed and had made only thirty miles by the night of the 8th. The breeze then freshened, and when next day the shores of Ferro, the last of the Canaries, sank from sight on the eastern horizon, many of the sailors loudly lamented their unseemly fate, and cried and sobbed like children. Columbus well understood the difficulty of dealing with these men. He provided against one chief source of discontent by keeping two different reckonings, a true one for himself

carried to England. Escaping finally, and reaching the Continent, he passes from our view in 1494, and is scarcely heard of again." (Winsor, *Narr. and Crit. Hist.*, ii. 104.) He died in May, 1506. A ridiculous story that he anticipated Columbus in the discovery of America originated in the misunderstanding of an interpolated passage in the Latin text of Schedel's *Registrum*, Nuremberg, 1493, p. 290 (the so-called *Nuremberg Chronicle*). See Winsor, *op. cit.* ii. 34; Major's *Prince Henry*, p. 326; Humboldt, *Examen critique*, tom. i. p. 256; Murr, *Diplomatische Geschichte des Ritters Behaim*, Nuremberg, 1778; Cladera, *Investigaciones históricas*, Madrid, 1794; Harrisse, *Bibliotheca Americana Vetustissima*, pp. 37–43. — The globe made by Behaim may now be seen in the city hall at Nuremberg. It "is made of *papier-maché*, covered with gypsum, and over this a parchment surface received the drawing; it is twenty inches in diameter." (Winsor, *op. cit.* ii. 105.) The portion west of the 330th meridian is evidently copied from Toscanelli's map. I give below (p. 429) a sketch (from Winsor, after Ruge's *Geschichte des Zeitalters der Entdeckungen*, p. 230) of Behaim's ocean, with the outline of the American continent superimposed in the proper place.

and a false one for his officers and crews. He was shrewd enough not to overdo it and awaken distrust. Thus after a twenty-four hours' run of 180 miles on September 10, he reported it as 144 miles; next day the run was 120 miles and he announced it as 108, and so on. But for this prudent if somewhat questionable device, it is not unlikely that the first week of October would have witnessed a mutiny in which Columbus would have been either thrown overboard or forced to turn back.

The weather was delicious, and but for the bug-a-boos that worried those poor sailors it would have been a most pleasant voyage. Chief among the imaginary terrors were three which deserve especial mention. At nightfall on September 13 the ships had crossed the magnetic line of no variation, and Columbus was astonished to see that the compass-needle, instead of pointing a little to the right of the pole-star, began to sway toward the left, and next day this deviation increased. It was impossible to hide such a fact from the sharp eyes of the pilots, and all were seized with alarm at the suspicion that this witch instrument was beginning to play them some foul trick in punishment of their temerity; but Columbus was ready with an ingenious astronomical explanation, and their faith in the profundity of his knowledge prevailed over their terrors.

Deflection of the needle.

The second alarm came on September 16, when they struck into vast meadows of floating seaweeds and grasses, abounding in tunny fish and crabs. They had now come more than 800 miles from

Ferro and were entering the wonderful Sargasso Sea, that region of the Atlantic six times as large as France, where vast tangles of vegetation grow upon the surface of water that is more than 2,000 fathoms deep, and furnish sustenance for an untold wealth of fishy life.[1] To

The Sargasso Sea.

[1] The situation of this Sargasso region in mid-ocean seems to be determined by its character as a quiet neutral ground between the great ocean-currents that flow past it on every side. Sargasso plants are found elsewhere upon the surface of the waves, but nowhere else do they congregate as here. There are reasons for supposing that in ancient times this region extended nearer to the African coast. Skylax (*Periplus*, cap. 109) says that beyond Kerne, at the mouth of Rio d' Ouro the sea cannot be navigated on account of the mud and seaweed. Sataspes, on his return to Persia, B. C. 470, told King Xerxes that his voyage failed because his ship stopped or was stuck fast. (Herodotus, iv. 43.) Festus Avienus mentions vast quantities of seaweed in the ocean west of the Pillars of Hercules: —

> Exsuperat autem gurgitem fucus frequens
> Atque impeditur æstus ex uligine . . .
> Sic nulla late flabra propellunt ratem,
> Sic segnis humor æquoris pigri stupet.
> Adjicit et illud, plurimum inter gurgites
> Exstare fucum, et sæpe virgulti vice
> Retinere puppim, etc.
>
> Avienus, *Ora Maritima*, 108, 117.

See also Aristotle, *Meteorol.*, ii. 1, 14; Pseudo-Aristotle, *De Mirab. Auscult.*, p. 106; Theophrastus, *Historia plantarum*, iv. 7 Jornandes, *De rebus Geticis*, apud Muratori, tom. i. p. 191; according to Strabo (iii. 2, § 7) tunny fish were caught in abundance in the ocean west of Spain, and were highly valued for the table on account of their fatness which was due to submarine vegetables on which they fed. Possibly the reports of these Sargasso meadows may have had some share in suggesting to Plato his notion of a huge submerged island Atlantis (*Timæus*, 25; *Kritias*, 108; cf. the notion of a viscous sea in Plutarch, *De facie in Orbe Luna*, 26). Plato's fancy has furnished a theme for much wild speculation. See, for example, Bailly, *Lettres sur l'Atlantide de Platon*, Paris, 1779. The belief that there can ever have been such an island in that part of the Atlantic is disposed of by the fact that the ocean

the eye of the mariner the Sargasso Sea presents somewhat the appearance of an endless green prairie, but modern ships plough through it with ease and so did the caravels of Columbus at first. After two or three days, however, the wind being light, their progress was somewhat impeded. It was not strange that the crews were frightened at such a sight. It seemed uncanny and weird, and revived ancient fancies about mysterious impassable seas and overbold mariners whose ships had been stuck fast in them. The more practical spirits were afraid of running aground upon submerged shoals, but all were somewhat reassured on this point when it was found that their longest plummet-lines failed to find bottom.

On September 22 the journal reports "no more grass." They were in clear water again, and more than 1,400 geographical miles from the Canaries.

there is nowhere less than two miles in depth. See the beautiful map of the Atlantic sea-bottom in Alexander Agassiz's *Three Cruises of the Blake*, Boston, 1888, vol. i. p. 108, and compare chap. vi. of that noble work, on "The Permanence of Continents and of Oceanic Basins;" see also Wallace's *Island Life*, chap. vi. It was formerly supposed that the Sargasso plants grow on the sea-bottom, and becoming detached rise to the surface (Peter Martyr, *De rebus oceanicis*, dec. iii. lib. v. p. 53; Humboldt, *Personal Narrative*, book i. chap. i.); but it is now known that they are simply rooted in the surface water itself. "L'accumulation de ces plantes marines est l'exemple le plus frappant de plantes congénères réunies sur le même point. Ni les forêts colossales de l'Himalaya, ni les graminées qui s'étendent à perte de vue dans les savanes américaines ou les steppes sibériens ne rivalisent avec ces prairies océaniques. Jamais sur un espace aussi étendu, ne se rencontrent de telles masses de plantes semblables. Quand on a vu la mer des Sargasses, on n'oublie point un pareil spectacle." Paul Gaffarel, "La Mer des Sargasses," *Bulletin de Géographie*, Paris, 1872, 6e série, tom. iv. p. 622.

A third source of alarm had already begun to disturb the sailors. They were discovering much more than they had bargained for. They were in the belt of the trade winds, and as the gentle but unfailing breeze wafted them steadily westward, doubts began to arise as to whether it would ever be possible to return. Fortunately soon after this question began to be discussed, the wind, jealous of its character for capriciousness even there, veered into the southwest.

The trade wind.

By September 25 the Admiral's chief difficulty had come to be the impatience of his crews at not finding land. On that day there was a mirage, or some such illusion, which Columbus and all hands supposed to be a coast in front of them, and hymns of praise were sung, but at dawn next day they were cruelly undeceived. Flights of strange birds and other signs of land kept raising hopes which were presently dashed again, and the men passed through alternately hot and cold fits of exultation and dejection. Such mockery seemed to show that they were entering a realm of enchantment. Somebody, perhaps one of the released jail-birds, hinted that if a stealthy thrust should happen some night to push the Admiral overboard, it could be plausibly said that he had slipped and fallen while star-gazing. His situation grew daily more perilous, and the fact that he was an Italian commanding Spaniards did not help him. Perhaps what saved him was their vague belief in his superior knowledge; they may have felt that they should need him in going back.

Impatience of the crews.

By October 4 there were ominous symptoms of mutiny, and the anxiety of Columbus was evinced in the extent of his bold understatement of that

Martin Behaim's Atlantic Ocean (with outline of American continent superimposed).

day's run, — 138 miles instead of the true figure 189. For some days his pilots had been begging him to change his course; perhaps they had passed between islands. Anything for a change! On the 7th at sunrise, they had come 2,724 geographical miles from the Canaries, which was farther than the Admiral's estimate of the distance to Cipango; but according to his false statement of the runs, it appeared that they had come scarcely 2,200 miles. This leads one to suspect that in stating the length of the voyage, as he had so often done, at 700 leagues,

Change of course from W. to W. S.W.

he may have purposely made it out somewhat shorter than he really believed it to be. But now after coming more than 2,500 miles he began to fear that he might be sailing past Cipango on the north, and so he shifted his course two points to larboard, or west-southwest. If a secret knowledge of Vinland had been his guiding-star he surely would not have turned his helm that way; but a glance at the Toscanelli map shows what was in his mind. Numerous flights of small birds confirmed his belief that land at the southwest was not far off. The change of direction was probably fortunate. If he had persisted in keeping on the parallel, 720 miles would have brought him to the coast of Florida, a little south of Cape Malabar. After the change he had but 505 miles of water before him, and the temper of the sailors was growing more dangerous with every mile,[1] — until October 11, when the signs of land became unmistakable, and the wildest excitement prevailed. A reward of 10,000 maravedis had been promised to the person who should first discover land, and ninety pair of eyes were strained that night with looking. About ten o'clock the Admiral, standing on the tower-like poop of his vessel, saw a distant light moving as if somebody were running along

[1] The often-repeated story that a day or two before the end of the voyage Columbus capitulated with his crew, promising to turn back if land were not seen within three days, rests upon the single and relatively inferior authority of Oviedo. It is not mentioned by Las Casas or Bernaldez or Peter Martyr or Ferdinand Columbus, and it is discredited by the tone of the Admiral's journal, which shows as unconquerable determination on the last day of the voyage as on any previous day. Cf. Irving, vol. i. p. 187.

the shore with a torch. This interpretation was doubted, but a few hours later a sailor on the Pinta saw land distinctly, and soon it was visible to all, a long low coast about five miles distant. This was at two in the morning of Friday, October 12,[1] — just ten weeks since they had sailed from Palos, just thirty-three days since they had lost sight of the coast of Ferro. The sails were now taken in, and the ships lay to, awaiting the dawn.

Land ahead! Oct. 12 (N. S. 21), 1492.

At daybreak the boats were lowered and Columbus, with a large part of his company, went ashore. Upon every side were trees of unknown kinds, and the landscape seemed exceedingly beautiful. Confident that they must have attained the object for which they had set sail, the crews were wild with exultation. Their heads were dazed with fancies of princely fortunes close at hand. The officers embraced Columbus or kissed his hands, while the sailors threw themselves at his feet, craving pardon and favour.

The crews go ashore.

These proceedings were watched with unutterable amazement and awe by a multitude of men, women, and children of cinnamon hue, different from any kind of people the Spaniards had ever seen. All were stark naked and most of them were more or less greased and painted. They thought that the ships were sea-monsters and the white men supernatural creatures

The astonished natives.

[1] Applying the Gregorian Calendar, or "new style," it becomes the 21st. The four hundredth anniversary will properly fall on October 21, 1892.

descended from the sky.[1] At first they fled in terror as these formidable beings came ashore, but presently, as they found themselves unmolested, curiosity began to overcome fear, and they slowly approached the Spaniards, stopping at every few paces to prostrate themselves in adoration. After a time, as the Spaniards received them with encouraging nods and smiles, they waxed bold enough to come close to the visitors and pass their hands over them, doubtless to make sure that all this marvel was a reality and not a mere vision. Experiences in Africa had revealed the eagerness of barbarians to trade off their possessions for trinkets, and now the Spaniards began exchanging glass beads and hawks' bells for cotton yarn, tame parrots, and small gold ornaments. Some sort of conversation in dumb show went on, and Columbus naturally interpreted everything in such wise as to fit his theories. Whether the natives understood him or not when he asked them where they got their gold, at any rate they pointed to the south, and thus confirmed Columbus in his suspicion that he had come to some island a little to the north of the opulent Cipango. He soon found that it was a small island, and he understood the name of it to be Guanahani. He took formal possession of it for Castile, just as the discoverers of the Cape Verde islands and the Guinea coasts had taken possession of those places for

Guanahani: where was it?

[1] This is a common notion among barbarians. "The Polynesians imagine that the sky descends at the horizon and encloses the earth. Hence they call foreigners *papalangi*, or 'heaven-bursters,' as having broken in from another world outside." Max Müller, *Chips from a German Workshop*, vol. ii. p. 268.

Portugal; and he gave it a Christian name, San Salvador. That name has since the seventeenth century been given to Cat island, but perhaps in pursuance of a false theory of map-makers; it is not proved that Cat island is the Guanahani of Columbus. All that can positively be asserted of Guanahani is that it was one of the Bahamas; there has been endless discussion as to which one, and the question is not easy to settle. Perhaps the theory of Captain Gustavus Fox, of the United States navy, is on the whole best supported. Captain Fox maintains that the true Guanahani was the little island now known as Samana or Atwood's Cay.[1] The problem well illustrates the difficulty in identifying any route from even a good description of landmarks, without the help of persistent proper names, especially after the lapse of time has somewhat altered the landmarks. From this point of view it is a very interesting problem and has its lessons for us; otherwise it is of no importance.

A cruise of ten days among the Bahamas, with visits to four of the islands, satisfied Columbus that he was in the ocean just east of Cathay, for Marco Polo had described it as studded with thousands of spice-bearing islands, and the Catalan map shows that some of these were supposed to be inhabited by naked savages. To be sure, he could not find any spices or

Groping for Cipango and the route to Quinsay.

[1] "An Attempt to solve the Problem of the First Landing Place of Columbus in the New World," in *United States Coast and Geodetic Survey — Report for* 1880 — *Appendix* 18, Washington, 1882.

valuable drugs, but the air was full of fragrance and the trees and herbs were strange in aspect and might mean anything; so for a while he was ready to take the spices on trust. Upon inquiries about gold the natives always pointed to the south, apparently meaning Cipango; and in that direction Columbus steered on the 25th of October, intending to stay in that wealthy island long enough to obtain all needful information concerning its arts and commerce. Thence a sail of less than ten days would bring him to the Chinese coast, along which he might comfortably cruise northwesterly as far as Quinsay and deliver to the Great Khan a friendly letter with which Ferdinand and Isabella had provided him. Alas, poor Columbus — unconscious prince of discoverers — groping here in Cuban waters for the way to a city on the other side of the globe and to a sovereign whose race had more than a century since been driven from the throne and expelled from the very soil of Cathay! Could anything be more pathetic, or better illustrate the profound irony with which our universe seems to be governed?

On reaching Cuba the Admiral was charmed with the marvellous beauty of the landscape, — a point in which he seems to have been unusually sensitive. He found pearl oysters along the shore, and although no splendid cities as yet appeared, he did not doubt that he had reached Cipango. But his attempts at talking with the amazed natives only served to darken counsel. He understood them to say that Cuba was part of the Asiatic continent,

Columbus reaches Cuba, and sends envoys to find a certain Asiatic prince.

and that there was a king in the neighbourhood who was at war with the Great Khan! So he sent two messengers to seek this refractory potentate, — one of them a converted Jew acquainted with Arabic, a language sometimes heard far eastward in Asia, as Columbus must have known. These envoys found pleasant villages, with large houses, surrounded with fields of such unknown vegetables as maize, potatoes, and tobacco; they saw men and women smoking cigars,[1] and little dreamed that in that fragrant and soothing herb there was a richer source of revenue than the spices of the East. They passed acres of growing cotton and saw in the houses piles of yarn waiting to be woven into rude cloth or twisted into nets for hammocks. But they found neither cities nor kings, neither gold nor spices, and after a tedious quest returned, somewhat disappointed, to the coast.

Columbus seems now to have become perplexed, and to have vacillated somewhat in his purposes. If this was the continent of Asia it was nearer than he had supposed, and how far mistaken he had been in his calculations no one could tell. But where was Cipango? He gathered from the natives that there was a

Columbus turns eastward; Pinzon deserts him.

[1] The first recorded mention of tobacco is in Columbus's diary for November 20, 1492: — "Hallaron los dos cristianos por el camino mucha gente que atravesaba á sus pueblos, mugeres y hombres con un tizon en la mano, yerbas para tomar sus sahumerios que acostumbraban," i. e. "the two Christians met on the road a great many people going to their villages, men and women with brands in their hands, made of herbs for taking their customary smoke." Navarrete, tom. i. p. 51.

great island to the southeast, abounding in gold, and so he turned his prows in that direction. On the 20th of November he was deserted by Martin Pinzon, whose ship could always outsail the others. It seems to have been Pinzon's design to get home in advance with such a story as would enable him to claim for himself an undue share of credit for the discovery of the Indies. This was the earliest instance of a kind of treachery such as too often marred the story of Spanish exploration and conquest in the New World.

For a fortnight after Pinzon's desertion Columbus crept slowly eastward along the coast of Cuba, now and then landing to examine the country and its products; and it seemed to him that besides pearls and mastic and aloes he found in the rivers indications of gold. When he reached the cape at the end of the island he named it Alpha and Omega, as being the extremity of Asia, — Omega from the Portuguese point of view, Alpha from his own. On the 6th of December he landed upon the northwestern coast of the island of Hayti, which he called Española, Hispaniola, or "Spanish land."[1] Here, as the natives seemed to tell him of a region to the southward and quite inland which abounded in gold, and which they called Cibao, the Admiral at once caught upon the apparent similarity of sounds and fancied that Cibao must be Cipango, and that

Columbus arrives at Hayti and thinks it must be Japan.

[1] Not "Little Spain," as the form of the word, so much like a diminutive, might seem to indicate. It is simply the feminine of *Español*, "Spanish," sc. *tierra* or *isla*. Columbus believed that the island was larger than Spain. See his letter to Gabriel Sanchez, in Harrisse, tom. i. p. 428.

at length he had arrived upon that island of marvels. It was much nearer the Asiatic mainland (i. e. Cuba) than he had supposed, but then, it was beginning to appear that in any case somebody's geography must be wrong. Columbus was enchanted with the scenery. "The land is elevated," he says, "with many mountains and peaks . . . most beautiful, of a thousand varied forms, accessible, and full of trees of endless varieties, so tall that they seem to touch the sky; and I have been told that they never lose their foliage. The nightingale [i. e. some kind of thrush] and other small birds of a thousand kinds were singing in the month of November [December] when I was there."[1] Before he had done much toward exploring this paradise, a sudden and grave mishap quite altered his plans. On Christmas morning, between midnight and dawn, owing to careless disobedience of orders on the part of the helmsman, the flag-ship struck upon a sand-bank near the present site of Port au Paix. All attempts to get her afloat were unavailing, and the waves soon beat her to pieces.

Wreck of the Santa Maria, Dec. 25, 1492.

This catastrophe brought home, with startling force, to the mind of Columbus, the fact that the news of his discovery of land was not yet known in Europe. As for the Pinta and her insubordinate commander, none could say whether they would ever be seen again or whether their speedy arrival in Spain might not portend more harm than good to Colum-

Columbus decides to go back to Spain.

[1] Columbus to Santangel, February 15, 1493 (Navarrete, tom. i. p. 168).

bus. His armament was now reduced to the little undecked Niña alone, such a craft as we should deem about fit for a summer excursion on Long Island Sound. What if his party should all perish, or be stranded helpless on these strange coasts, before any news of their success should reach the ears of friends in Europe! Then the name of Columbus would serve as a by-word for foolhardiness, and his mysterious fate would simply deter other expeditions from following in the same course. Obviously the first necessity of the situation was to return to Spain immediately and report what had already been done. Then it would be easy enough to get ships and men for a second voyage.

This decision led to the founding of an embryo colony upon Hispaniola. There was not room enough for all the party to go in the Niña, and quite a number begged to be left behind, because they found life upon the island lazy and the natives, especially the women, seemed well-disposed toward them. So a blockhouse was built out of the wrecked ship's timbers and armed with her guns, and in commemoration of that eventful Christmas it was called Fort Nativity (*La Navidad*). Here forty men were left behind, with provisions enough for a whole year, and on January 4, 1493, the rest of the party went on board the Niña and set sail for Spain. Two days later in following the northern coast of Hispaniola they encountered the Pinta, whose commander had been delayed by trading with the natives and by finding some gold. Pinzon tried to explain his sudden disappearance by alleging that

Building of the blockhouse, La Navidad.

Meeting with Pinzon.

stress of weather had parted him from his comrades, but his excuses were felt to be lame and improbable. However it may have been with his excuses, there was no doubt as to the lameness of his foremast; it had been too badly sprung to carry much sail, so that the Pinta could not again run away from her consort.

On this return voyage the Admiral, finding the trade winds dead against him, took a northeasterly course until he had passed the thirty-seventh parallel and then headed straight toward Spain. On the 12th of February a storm was brewing, and during the next four days it raged with such terrific violence that it is a wonder how those two frail caravels ever came out of it. They were separated this time not to meet again upon the sea. Expecting in all likelihood to be engulfed in the waves with his tiny craft, Columbus sealed and directed to Ferdinand and Isabella two brief reports of his discovery, written upon parchment. Each of these he wrapped in a cloth and inclosed in the middle of a large cake of wax, which was then securely shut up in a barrel. One of the barrels was flung into the sea, the other remained standing on the little quarter-deck to await the fate of the caravel. The anxiety was not lessened by the sight of land on the 15th, for it was impossible to approach it so as to go ashore, and there was much danger of being dashed to pieces.

Terrible storm in mid-ocean, Feb., 1493.

At length on the 18th, the storm having abated, the ship's boat went ashore and found that it was the island of St. Mary, one of the Azores. It is

worthy of note that such skilful sailors as the Niña's captain, Vicente Yañez Pinzon, and the pilot Ruiz were so confused in their reckoning as to suppose themselves near the Madeiras, whereas Columbus had correctly maintained that they were approaching the Azores, — a good instance of his consummate judgment in nautical questions.[1] From the Portuguese governor of the island this Spanish company met with a very ungracious reception. A party of sailors whom Columbus sent ashore to a small chapel of the Virgin, to give thanks for their deliverance from shipwreck, were seized and held as prisoners for five days. It afterwards appeared that this was done in pursuance of general instructions from the king of Portugal to the governors of his various islands. If Columbus had gone ashore he would probably have been arrested himself. As it was, he took such a high tone and threatened to such good purpose that the governor of St. Mary was fain to give up his prisoners for fear of bringing on another war between Portugal and Castile.

Cold reception at the Azores.

Having at length got away from this unfriendly island, as the Niña was making her way toward Cape St. Vincent and within 400 miles of it, she was seized by another fierce tempest and driven upon the coast of Portugal, where Columbus and his crew were glad of a chance to run into the river Tagus for shelter. The news of his voyage and his discoveries aroused intense excitement in Lisbon. Astonishment was mingled with

Columbus is driven ashore in Portugal, where the king is advised to have him assassinated;

[1] Las Casas, tom. i. pp. 443, 449.

chagrin at the thought that the opportunity for all this glory and profit had first been offered to Portugal and foolishly lost. The king even now tried to persuade himself that Columbus had somehow or other been trespassing upon the vast and vague undiscovered dominions granted to the Crown of Portugal by Pope Eugenius IV. Some of the king's counsellors are said to have urged him to have Columbus assassinated; it would be easy enough to provoke such a high-spirited man into a quarrel and then run him through the body.[1] To clearer heads, however, the imprudence of such a course was manifest. It was already impossible to keep the news of the discovery from reaching Spain, and Portugal could not afford to go to war with her stronger neighbour. In fact even had John II. been base enough to resort to assassination, which seems quite incompatible with the general character of Lope de Vega's "perfect prince," Columbus was now too important a personage to be safely interfered with. So he was invited to court and made much of. On the 13th of March he set sail again and arrived in the harbour of Palos at noon of the 15th. His little caravel was promptly recognized by the people, and as her story flew from mouth to mouth all the business of the town was at an end for that day.[2]

but to offend Spain so grossly would be dangerous.

[1] This story rests upon the explicit statement of a contemporary Portuguese historian of high authority, Garcia de Resende, *Chronica del Rey Dom João II.*, Lisbon, 1622, cap. clxiv. (written about 1516); see also Vasconcellos, *Vida del Rey Don Juan II.*, Madrid, 1639, lib. vi.

[2] "When they learnt that she returned in triumph from the discovery of a world, the whole community broke forth into trans-

Towards evening, while the bells were ringing and the streets brilliant with torches, another vessel entered the harbour and dropped anchor. She was none other than the Pinta! The storm had driven her to Bayonne, whence Martin Pinzon instantly despatched a message to Ferdinand and Isabella, making great claims for himself and asking permission to wait upon them with a full account of the discovery. As soon as practicable he made his way to Palos, but when on arriving he saw the Niña already anchored in the harbour his guilty heart failed him. He took advantage of the general hubbub to slink ashore as quickly and quietly as possible, and did not dare to show himself until after the Admiral had left for Seville. The news from Columbus reached the sovereigns before they had time to reply to the message of Pinzon; so when their answer came to him it was cold and stern and forbade him to appear in their presence. Pinzon was worn out with the hardships of the homeward voyage, and this crushing reproof was more than he could bear. His sudden death, a few days afterward, was generally attributed to chagrin.[1]

Columbus and Pinzon at Palos; death of Pinzon.

From Seville the Admiral was summoned to attend court at Barcelona, where he was received with triumphal honours. He was directed to

ports of joy." Irving's *Columbus*, vol. i. p. 318. This is projecting our present knowledge into the past. We now know that Columbus had discovered a new world. He did not so much as suspect that he had done anything of the sort; neither did the people of Palos.

[1] Charlevoix, *Histoire de l'isle Espagnole, ou de St. Domingue*, Paris, 1730, liv. ii.; Muñoz, *Historia de las Indias ó Nuevo Mundo*, Madrid, 1793, lib. iv. § 14.

seat himself in the presence of the sovereigns, a courtesy usually reserved for royal personages.[1] Intense interest was felt in his specimens of stuffed birds and small mammals, his live parrots, his collection of herbs which he supposed to have medicinal virtues, his few pearls and trinkets of gold, and especially his six painted and bedizened barbarians, the survivors of ten with whom he had started from Hispaniola. Since in the vague terminology of that time the remote and scarcely known parts of Asia were called the Indies, and since the islands and coasts just discovered were Indies, of course these red men must be Indians. So Columbus had already named them in his first letter written from the Niña, off the Azores, sent by special messenger from Palos, and now in April, 1493, printed at Barcelona, containing the particulars of his discovery, — a letter appropriately addressed to the worthy Santangel but for whose timely intervention he might have ridden many a weary league on

Columbus is received by the sovereigns at Barcelona, April, 1493.

[1] He was also allowed to quarter the royal arms with his own, "which consisted of a group of golden islands amid azure billows. To these were afterwards added five anchors, with the celebrated motto, well known as being carved on his sepulchre." Prescott's *Ferdinand and Isabella*, pt. i. chap. vii. This statement about the motto is erroneous. See below, p. 514. Considering the splendour of the reception given to Columbus, and the great interest felt in his achievement, Mr. Prescott is surprised at finding no mention of this occasion in the local annals of Barcelona, or in the royal archives of Aragon. He conjectures, with some probability, that the cause of the omission may have been what an American would call "sectional" jealousy. This Cathay and Cipango business was an affair of Castile's, and, as such, quite beneath the notice of patriotic Aragonese archivists! That is the way history has too often been treated. With most people it is only a kind of ancestor worship.

that mule of his to no good purpose.[1] It was generally assumed without question that the Admiral's theory of his discovery must be correct, that the coast of Cuba must be the eastern extremity of China, that the coast of Hispaniola must be the northern extremity of Cipango, and that a direct route — much shorter than that which Portugal had so long been seeking — had now been found to those lands of illimitable wealth described by Marco Polo.[2] To be sure Columbus had not

[1] The unique copy of this first edition of this Spanish letter is a small folio of two leaves, or four pages. It was announced for sale in Quaritch's Catalogue, April 16, 1891, No. 111, p. 47, for £1,750. Evidently most book-lovers will have to content themselves with the facsimile published in London, 1891, price two guineas. A unique copy of a Spanish reprint in small quarto, made in 1493, is preserved in the Ambrosian library at Milan. In 1889 Messrs. Ellis & Elvey, of London, published a facsimile *alleged* to have been made from an edition of about the same date as the Ambrosian quarto; but there are good reasons for believing that these highly respectable publishers have been imposed upon. It is a time just now when fictitious literary discoveries of this sort may command a high price, and the dealer in early Americana must keep his eyes open. See Quaritch's note, *op. cit.* p. 49; and Justin Winsor's letter in *The Nation*, April 9, 1891, vol. lii. p. 298.

[2] "The lands, therefore, which Columbus had visited were called the West Indies; and as he seemed to have entered upon a vast region of unexplored countries, existing in a state of nature, the whole received the comprehensive appellation of the New World." Irving's *Columbus*, vol. i. p 333. These are very grave errors, again involving the projection of our modern knowledge into the past. The lands which Columbus had visited were called simply the Indies; it was not until long after his death, and after the crossing of the Pacific ocean, that they were distinguished from the East Indies. The *New World* was not at first a "comprehensive appellation" for the countries discovered by Columbus; it was at first applied to one particular region never visited by him, viz to that portion of the southeastern coast of South America first explored by Vespucius. See vol. ii. pp. 129, 130.

as yet seen the evidences of this Oriental splendour, and had been puzzled at not finding them, but he felt confident that he had come very near them and would come full upon them in a second voyage. There was nobody who knew enough to refute these opinions,[1] and really why should not this great geographer, who had accomplished so much already which people had scouted as impossible, — why should he not know what he was about? It was easy enough now to get men and money for the second voyage. When the Admiral sailed from Cadiz on September 25, 1493, it was with seventeen ships carrying 1,500 men. Their dreams were of the marble palaces of Quinsay, of isles of spices, and the treasures of Prester John. The sovereigns wept for joy as they thought that such untold riches were vouchsafed them by the special decree of Heaven, as a reward for having overcome the Moor at Granada and banished the Jews from Spain.[2] Columbus shared these views and

General excitement at the news that a way to the Indies had been found.

[1] Peter Martyr, however, seems to have entertained some vague doubts, inasmuch as this assumed nearness of the China coast on the west implied a greater eastward extension of the Asiatic continent than seemed to him probable: — "Insulas reperit plures; has esse, de quibus fit apud cosmographos mentio extra oceanum orientalem, adjacentes Indiæ arbitrantur. Nec inficior ego penitus, *quamvis sphæræ magnitudo aliter sentire videatur*; neque enim desunt qui parvo tractu a finibus Hispaniæ distare littus Indicum putent." *Opus Epist.*, No. 135. The italicizing is mine.

[2] This abominable piece of wickedness, driving 200,000 of Spain's best citizens from their homes and their native land, was accomplished in pursuance of an edict signed March 30, 1492. There is a brief account of it in Prescott's *Ferdinand and Isabella*, pt. i. chap. vi.

regarded himself as a special instrument for executing the divine decrees. He renewed his vow to rescue the Holy Sepulchre, promising within the next seven years to equip at his own expense a crusading army of 50,000 foot and 4,000 horse; within five years thereafter he would follow this with a second army of like dimensions.

Thus nobody had the faintest suspicion of what had been done. In the famous letter to Santangel there is of course not a word about a New World. The grandeur of the achievement was quite beyond the ken of the generation that witnessed it. For we have since come to learn that in 1492 the contact between the eastern and the western halves of our planet was first really begun, and the two streams of human life which had flowed on for countless ages apart were thenceforth to mingle together. The first voyage of Columbus is thus a unique event in the history of mankind. Nothing like it was ever done before, and nothing like it can ever be done again. No worlds are left for a future Columbus to conquer. The era of which this great Italian mariner was the most illustrious representative has closed forever.

This voyage was an event without any parallel in history.

CHAPTER VI.

THE FINDING OF STRANGE COASTS.

But that era did not close with Columbus, nor did he live long enough to complete the Discovery of America. Our practice of affixing specific dates to great events is on many accounts indispensable, but it is sometimes misleading. Such an event as the discovery of a pair of vast continents does not take place within a single year. When we speak of America as discovered in 1492, we do not mean that the moment Columbus landed on two or three islands of the West Indies, a full outline map of the western hemisphere from Labrador and Alaska to Cape Horn suddenly sprang into existence — like Pallas from the forehead of Zeus — in the minds of European men. Yet people are perpetually using arguments which have neither force nor meaning save upon the tacit assumption that somehow or other some such sort of thing must have happened. This grotesque fallacy lies at the bottom of the tradition which has caused so many foolish things to be said about that gallant mariner, Americus Vespucius. In geographical discussions the tendency to overlook the fact that Columbus and his immediate successors did not sail with the latest edition of Black's General Atlas in

The Discovery of America was a gradual process.

their cabins is almost inveterate; it keeps revealing itself in all sorts of queer statements, and probably there is no cure for it except in familiarity with the long series of perplexed and struggling maps made in the sixteenth century. Properly regarded, the Discovery of America was not a single event, but a very gradual process. It was not like a case of special creation, for it was a case of evolution, and the voyage of 1492 was simply the most decisive and epoch-marking incident in that evolution. Columbus himself, after all his four eventful voyages across the Sea of Darkness, died in the belief that he had simply discovered the best and straightest route to the eastern shores of Asia. Yet from his first experiences in Cuba down to his latest voyage upon the coasts of Honduras and Veragua, he was more or less puzzled at finding things so different from what he had anticipated. If he had really known anything with accuracy about the eastern coast of Asia, he would doubtless soon have detected his fundamental error, but no European in his day had any such knowledge. In his four voyages Columbus was finding what he supposed to be parts of Asia, what we now know to have been parts of America, but what were really to him and his contemporaries neither more nor less than Strange Coasts. We have now to consider briefly his further experiences upon these strange coasts.

The second voyage of Columbus was begun in a very different mood and under very different auspices from either his former or his two subsequent

voyages. On his first departure from Palos, in 1492, all save a few devoted friends regarded him as a madman rushing upon his doom; and outside the Spanish peninsula the expedition seems to have attracted no notice. But on the second start, in 1493, all hands supposed that they were going straight to golden Cathay and to boundless riches. It was not now with groans but with pæans that they flocked on board the ships; and the occasion was observed, with more or less interest, by some people in other countries of Europe, — as in Italy, and for the moment in France and England.

At the same time with his letter to Santangel, the Admiral had despatched another account, substantially the same,[1] to Gabriel Sanchez,[2] another officer of the royal treasury. Several copies of a Latin translation of this letter were published at Rome, at Paris, and elsewhere, in the course of the year 1493.[3] The story which

The letter to Sanchez.

[1] "Un duplicata de cette relation," Harrisse, *Christophe Colomb*, tom i. p. 419.

[2] Often called Raphael Sanchez.

[3] The following epigram was added to the first Latin edition of the latter by Corbaria, Bishop of Monte-Peloso: —

Ad Invictissimum Regem Hispaniarum:

Iam nulla Hispanis tellus addenda triumphis,
Atque parum tantis viribus orbis erat.
Nunc longe eois regio deprensa sub undis,
Auctura est titulos Betice magne tuos.
Unde repertori incrita referenda Columbo
Gratia, sed summo est maior habenda deo,
Qui vincenda parat noua regna tibique sibique
Teque simul fortem prestat et esse pium.

These lines are thus paraphrased by M. Harrisse: —

To the Invincible King of the Spains:

Less wide the world than the renown of Spain,
To swell her triumphs no new lands remain.

it contained was at once paraphrased in Italian verse by Giuliano Dati, one of the most popular poets of the age, and perhaps in the autumn of 1493 the amazing news that the Indies had been found by sailing west[1] was sung by street

> Rejo ce, Iberia! see thy fame increased!
> Another world Columbus from the East
> And the mid-ocean summons to thy sway!
> Give thanks to him — but loftier homage pay
> To God Supreme, who gives its realms to thee!
> Greatest of monarchs, first of servants be!
> *Bibliotheca Americana Vetustissima*, p. 13.

The following is a literal version: — "Already there is no land to be added to the triumphs of Spain, and the earth was too small for such great deeds. Now a far country under the eastern waves has been discovered, and will be an addition to thy titles, O great Bætica! wherefore thanks are due to the illustrious discover Columbus; but greater thanks to the supreme God, who is making ready new realms to be conquered for thee and for Himself, and vouchsafes to thee to be at once strong and pious." It will be observed that nothing is said about "another world."

An elaborate account of these earliest and excessively rare editions is given by M. Harrisse, *loc. cit.*

[1] Or, as Mr. Major carelessly puts it, "the astounding news of the discovery of a new world." (*Select Letters of Columbus*, p. vi.) Mr. Major knows very well that no such "news" was possible for many a year after 1493; his remark is, of course, a mere slip of the pen, but if we are ever going to straighten out the tangle of misconceptions with which this subject is commonly surrounded, we must be careful in our choice of words. — As a fair specimen of the chap-book style of Dati's stanzas, we may cite the fourteenth: —

> Hor vo tornar almio primo tractato
> dellisole trovate incognite a te
> in q̃sto anno presente q̃sto e stato
> nel millequatrocento novãtatre,
> uno che xp̃ofan colõbo chiamato,
> che e stato in corte der prefecto Re
> ha molte volte questa stimolato,
> el Re ch'cerchi acrescere il suo stato.

M. Harrisse gives the following version: —

> Back to my theme, O Listener, turn with me
> And hear of islands all unknown to thee!

urchins in Florence. We are also informed, in an ill-vouched but not improbable clause in Ramusio, that not far from that same time the news was heard with admiration in London, where it was pronounced "a thing more divine than human to sail by the West unto the East, where spices grow, by a way that was never known before;" [1] and it seems altogether likely that it was this news that prompted the expedition of John Cabot hereafter to be mentioned.[2]

The references to the discovery are very scanty, however, until after the year 1500, and extremely vague withal. For example, Bernardino de Carvajal, the Spanish ambassador at the papal court, delivered an oration in Rome on June 19, 1493, in which he said: "And Christ placed under their [Ferdinand and Isabella's] rule the Fortunate [Canary] islands, the fertility of which has been ascertained to be wonderful. And he has lately disclosed some other unknown ones towards the Indies which may be considered among the most precious things on earth; and it is believed that they will be gained

Earliest references to the discovery.

> Islands whereof the grand discovery
> Chanced in this year of fourteen ninety-three.
> One Christopher Colombo, whose resort
> Was ever in the King Fernando's court,
> Bent himself still to rouse and stimulate
> The King to swell the borders of his State.
> *Bibliotheca Americana Vetustissima*, p. 29.

The entire poem of sixty-eight stanzas is given in Major, *op. cit.* pp. lxxiii.–xc. It was published at Florence, Oct. 26, 1493, and was called "the story of the discovery [not of a new world, but] of the new Indian islands of Canary!" (*Storia della inventione delle nuove isole dicanaria indiane.*)

[1] *Raccolta di Navigazioni*, etc., Venice, 1550, tom. i. fol. 414.

[2] See below, vol. ii. pp. 2–15.

over to Christ by the emissaries of the king."[1] Outside of the Romance countries we find one German version of the first letter of Columbus, published at Strasburg, in 1497,[2] and a brief allusion to the discovery in Sebastian Brandt's famous allegorical poem, "Das Narrenschiff," the first edition of which appeared in 1494.[3] The earliest distinct reference to Columbus in the English language is to be found in a translation of this poem, "The Shyppe of Fooles," by Henry Watson, published in London by Wynkyn de Worde in 1509.

Earliest reference in English.

The purpose of Brandt's allegory was to satirize the follies committed by all sorts and conditions of men. In the chapter, "Of hym that wyll wryte and enquere of all regyons," it is said: "There was one that

[1] Harrisse, *Bibliotheca Americana Vetustissima*, p. 35.

[2] Id. p. 50.

[3] Auch hat man sydt in Portigall
Und in Hyspanyen uberall
Golt-inseln funden, und nacket lůt
Von den man vor wust sagen nůt.
Harrisse, *Bibl. Amer. Vet.; Additions*, p. 4.

Or, in more modern German: —

Wie man auch jüngst von Portugal
Und Hispanien aus schier überall
Goldinseln fand und nakte Leute,
Von denen man erst weiss seit heute.
Das Narrenschiff, ed. Simrock, Berlin, 1872, p. 161.

In the Latin version of 1497, now in the National Library at Paris, it goes somewhat differently: —

Antea quę fuerat priscis incognita tellus:
Exposita est oculis & manifesta patet.
Hesperię occiduę rex Ferdinandus: in alto
Aequore nunc gentes repperit innumeras.
Harrisse, *op. cit.; Additions*, p. 7.

It will be observed that these foreign references are so ungallant, and so incorrect, as to give all the credit to Ferdinand, while poor Isabella is not mentioned!

knewe that in y^e^ ysles of Spayne was enhabitantes. Wherefore he asked men of Kynge Ferdynandus & wente & founde them, the whiche lyved as beestes."[1] Until after the middle of the sixteenth century no English chronicler mentions either Columbus or the Cabots, nor is there anywhere an indication that the significance of the discoveries in the western ocean was at all understood.[2]

North of the Alps and Pyrenees the interest in what was going on at the Spanish court in 1493 was probably confined to very few people. As for Venice and Genoa we have no adequate means of knowing how they felt about the matter, — a fact which in itself is significant. The interest was centred in Spain and Portugal. There it was intense and awakened fierce heart-burnings. Though John II. had not given his consent to the proposal for murdering Columbus, he appears to have seriously entertained the thought of sending a small fleet across the Atlantic as soon as possible, to take possession of some point in Cathay or Cipangó and then dispute the claims of the Spaniards.[3] Such a summary proceeding might perhaps be defended on the ground that the grant from Pope Eugenius V. to the crown of Portugal expressly included "the Indies." In the treaty of 1479, moreover, Spain had promised not to interfere with the discoveries and possessions of the Portuguese.

Portuguese claim to the Indies.

But whatever King John may have intended,

[1] Harrisse, *op. cit.; Additions*, p. 45.

[2] Harrisse, *Jean et Sebastien Cabot*, Paris, 1882, p. 15.

[3] Vasconcellos, *Vida del Rey Don Juan II.*, Madrid, 1639, lib. vi.

Ferdinand and Isabella were too quick for him. No sooner had Columbus arrived at Barcelona than an embassy was despatched to Rome, asking for a grant of the Indies just discovered by that navigator in the service of Castile. The notorious Rodrigo Borgia, who had lately been placed in the apostolic chair as Alexander VI., was a native of Valencia in the kingdom of Aragon, and would not be likely to refuse such a request through any excess of regard for Portugal. As between the two rival powers the pontiff's arrangement was made in a spirit of even-handed justice.

Bulls of Pope Alexander VI.

On the 3d of May, 1493, he issued a bull conferring upon the Spanish sovereigns all lands already discovered or thereafter to be discovered in the western ocean, with jurisdiction and privileges in all respects similar to those formerly bestowed upon the crown of Portugal. This grant was made by the pope "out of our pure liberality, certain knowledge, and plenitude of apostolic power," and by virtue of "the authority of omnipotent God granted to us in St. Peter, and of the Vicarship of Jesus Christ which we administer upon the earth."[1] It was a substantial reward for the monarchs who had completed the overthrow of Mahometan rule in Spain, and it afforded them

[1] "De nostra mera liberalitate, et ex certa scientia, ac de apostolicæ potestatis plenitudine." . . . "auctoritate omnipotentis Dei nobis in beato Petro concessa, ac vicariatus Jesu Christi qua fungimur in terris." The same language is used in the second bull. Mr. Prescott (*Ferdinand and Isabella*, part i. chap. vii.) translates *certa scientia* "infallible knowledge," but in order to avoid any complications with modern theories concerning papal infallibility, I prefer to use a less technical word.

opportunities for further good work in converting the heathen inhabitants of the islands and mainland of Asia.[1]

On the following day Alexander issued a second bull in order to prevent any occasion for quarrel between Spain and Portugal.[2] He decreed that

[1] A year or two later the sovereigns were further rewarded with the decorative title of "Most Catholic." See Zurita, *Historia del Rey Hernando*, Saragossa, 1580, lib. ii. cap. xl.; Peter Martyr, *Epist.* clvii.

[2] The complete text of this bull, with Richard Eden's translation, is given at the end of this work; see below, Appendix B. The official text is in *Magnum Bullarium Romanum*, ed. Cherubini, Lyons, 1655, tom. i. p. 466. The original document received by Ferdinand and Isabella is preserved in the Archives of the Indies at Seville; it is printed entire in Navarrete, *Coleccion de viages*, tom. ii. No. 18. Another copy, less complete, may be found in Raynaldus, *Annales ecclesiastici*, Lucca, 1754, tom. xi. p. 214, No. 19–22; and another in Leibnitz, *Codex Diplomaticus*, tom. i. pt. i. p. 471. It is often called the Bull "Inter Cetera," from its opening words.

The origin of the pope's claim to apostolic authority for giving away kingdoms is closely connected with the fictitious "Donation of Constantine," an edict probably fabricated in Rome about the middle of the eighth century. The title of the old Latin text is *Edictum domini Constantini Imp.*, apud Pseudo-Isidorus, *Decretalia*. Constantine's transfer of the seat of empire from the Tiber to the Bosphorus tended greatly to increase the dignity and power of the papacy, and I presume that the fabrication of this edict, four centuries afterward, was the expression of a sincere belief that the first Christian emperor *meant* to leave the temporal supremacy over Italy in the hands of the Roman see. The edict purported to be such a donation from Constantine to Pope Sylvester I., but the extent and character of the donation was stated with such vagueness as to allow a wide latitude of interpretation. Its genuineness was repeatedly called in question, but belief in it seems to have grown in strength until after the thirteenth century. Leo IX., who was a strong believer in its genuineness, granted in 1054 to the Normans their conquests in Sicily and Calabria, to be held as a fief of the Roman see. (Muratori, *Annali d' Italia*, tom. vi. pt. ii. p. 245.) It was next used to sustain the papal

all lands discovered or to be discovered to the west of a meridian one hundred leagues west of

claim to suzerainty over the island of Corsica. A century later John of Salisbury maintained the right of the pope to dispose "of all *islands* on which Christ, the Sun of righteousness, hath shined," and in conformity with this opinion Pope Adrian IV. (Nicholas Breakspeare, an Englishman) authorized in 1154 King Henry II. of England to invade and conquer Ireland. (See Adrian IV., *Epist.* 76, apud Migne, *Patrologia*, tom. clxxxviii.) Dr. Lanigan, in treating of this matter, is more an Irishman than a papist, and derides "this nonsense of the pope's being the head-owner of all Christian islands." (*Ecclesiastical History of Ireland*, vol. iv. p. 159.) — Gregory VII., in working up to the doctrine that all Christian kingdoms should be held as fiefs under St. Peter (Baronius, *Annales*, tom. xvii. p. 430; cf. Villemain, *Histoire de Grégoire VII.*, Paris, 1873, tom. ii. pp. 59–61), does not seem to have appealed to the Donation. Perhaps he was shrewd enough to foresee the kind of objection afterwards raised by the Albigensians, who pithily declared that if the suzerainty of the popes was derived from the Donation, then they were successors of Constantine and not of St. Peter. (Moneta Cremonensis, *Adversus Catharos et Waldenses*, ed. Ricchini, Rome, 1743, v. 2.) But Innocent IV. summarily disposed of this argument at the Council of Lyons in 1245, when he deposed the Emperor Frederick II. and King Sancho II. of Portugal, — saying that Christ himself had bestowed temporal as well as spiritual headship upon St. Peter and his successors, so that Constantine only gave up to the Church what belonged to it already. The opposite or Ghibelline theory was eloquently set forth by Dante, in his treatise *De Monarchia;* he held that inasmuch as the Empire existed before the Church, it could not be derived from it. Dante elsewhere expressed his abhorrence of the Donation: —

> Ahi Constantin, di quanto mal fu matre,
> Non la tua conversion, ma quella dote
> Che da te prese il primo ricco patre!
>
> *Inferno*, xix. 115.

Similar sentiments were expressed by many of the most popular poets from the twelfth century to the sixteenth. Walther von der Vogelweide was sure that if the first Christian emperor could have foreseen the evils destined to flow from his Donation, he would have withheld it: —

the Azores and Cape Verde islands should belong to the Spaniards. Inasmuch as between the

> Solte ich den pfaffen raten an den triuwen min,
> So spræche ir haut den armen zuo : se, daz ist din,
> Ir zunge sünge, unde lieze mengem man daz sin,
> Gedæhten daz ouch si dur Got wæren almuosenære.
> Do gab ir erste teil der Kuenik Konstantin,
> Het er gewest, daz da von uebel kuenftik wære,
> So het er wol underkomen des riches swære,
> Wan daz si do waren kiusche, und uebermuete lære.
>
> Hagen, *Minnesinger-Sammlung*, Leipsic, 1838, bd. I. p. 270.

Ariosto, in a passage rollicking with satire, makes his itinerant paladin find the "stinking" Donation in the course of his journey upon the moon: —

> Di varii fiori ad un gran monte passa,
> Ch' ebber già buono odore, or puzzan forte,
> Questo era il dono, se però dir lece,
> Che Constantino al buon Silvestro fece.
>
> *Orlando Furioso*, xxxiv. 80.

The Donation was finally proved to be a forgery by Laurentius Valla in 1440, in his *De falso credita et ementita Constantini donatione declamatio* (afterward spread far and wide by Ulrich von Hutten), and independently by the noble Reginald Pecock, bishop of Chichester, in his *Repressor*, written about 1447. — During the preceding century the theory of Gregory VII. and Innocent IV. had been carried to its uttermost extreme by the Franciscan monk Alvaro Pelayo, in his *De Planctu Ecclesiæ*, written at Avignon during the "Babylonish Captivity," about 1330 (printed at Venice in 1560), and by Agostino Trionfi, in his *Summa de potestate ecclesiastica*, Augsburg, 1473, an excessively rare book, of which there is a copy in the British Museum. These writers maintained that the popes were suzerains of the whole earth and had absolute power to dispose not only of all Christian kingdoms, but also of all heathen lands and powers. It was upon this theory that Eugenius IV. seems to have acted with reference to Portugal and Alexander VI. with reference to Spain. Of course there was never a time when such claims for the papacy were not denied by a large party within the Church. The Spanish sovereigns in appealing to Alexander VI. took care to hint that some of their advisers regarded them as already entitled to enjoy the fruits of their discoveries, even before obtaining the papal permission, but they did not choose to act upon that opinion (Herrera, decad. i.

westernmost of the Azores and the easternmost of the Cape Verde group the difference in longitude is not far from ten degrees, this description must be allowed to be somewhat vague, especially in a document emanating from "certain know-

lib. ii. cap. 4). The kings of Portugal were less reserved in their submission. In *Valasci Ferdinandi ad Innocentium octauum de obedientia oratio*, a small quarto printed at Rome about 1488, John II. did homage to the pope for the countries just discovered by Bartholomew Dias. His successor Emanuel did the same after the voyages of Gama and Vespucius. In a small quarto, *Obedientia potentissimi Emanuelis Lusitaniæ regis &c. per clarissimum juris consultum Dieghum Pacettū oratorem ad Iuliū Pont. Max.*, Rome, 1505, all the newly found lands are laid at the feet of Julius II. in a passage that ends with words worth noting: "Accipe tandem orbem ipsum terrarum, Deus enim noster es." i. e. "Accept in fine the earth itself, for thou art our God." Similar homage was rendered to Leo X. in 1513, on account of Albuquerque's conquests in Asia. — We may suspect that if the papacy had retained, at the end of the fifteenth century, anything like the overshadowing power which it possessed at the end of the twelfth, the kings of Portugal would not have been quite so unstinted in their homage. As it came to be less of a reality and more of a flourish of words, it cost less to offer it. Among some modern Catholics I have observed a disposition to imagine that in the famous bull of partition Alexander VI. acted not as supreme pontiff but merely as an arbiter, in the modern sense, between the crowns of Spain and Portugal; but such an interpretation is hardly compatible with Alexander's own words. An arbiter, as such, does not make awards by virtue of "the authority of Omnipotent God granted to us in St. Peter, and of the Vicarship of Jesus Christ which we administer upon the earth."

Since writing this note my attention has been called to Dr. Ignaz von Döllinger's *Fables respecting the Popes of the Middle Ages*, London, 1871; and I find in it a chapter on the Donation of Constantine, in which the subject is treated with a wealth of learning. Some of my brief references are there discussed at considerable length. To the references to Dante there is added a still more striking passage, where Constantine is admitted into Heaven *in spite of* his Donation (*Paradiso*, xx. 55).

ledge;"[1] and it left open a source of future disputes which one would suppose the "plenitude of apostolic power" might have been worthily employed in closing. The meridian 25° W., however, would have satisfied the conditions, and the equitable intent of the arrangement is manifest. The Portuguese were left free to pursue their course of discovery and conquest along the routes which they had always preferred. King John, however, was not satisfied. He entertained vague hopes of finding spice islands, or something worth having, in the western waters; and he wished to have the Line of Demarcation carried farther to the west. After a year of diplomatic wrangling a treaty was signed at Tordesillas, June 7, 1494, in which Spain consented to the moving of the line to a distance of 370 leagues west from the Cape Verde islands.[2] It would thus on a modern map fall somewhere between the 41st and 44th meridians west of Greenwich. This amendment had important and curious consequences. It presently gave the Brazilian coast to the Portuguese, and thereupon played a leading part in the singular and complicated series of events that ended in giving the name of Americus Vespucius to that

Treaty of Tordesillas.

[1] The language of the bull is even more vague than my version in the text. His Holiness describes the lands to be given to the Spaniards as lying "to the west and south" (versus occidentem et meridiem) of his dividing meridian. Land to the south of a meridian would be in a queer position! Probably it was meant to say that the Spaniards, once west of the papal meridian, might go south as well as north. For the king of Portugal had suggested that they ought to confine themselves to northern waters.

[2] For the original Spanish text of the treaty of Tordesillas, see Navarrete, tom. ii. pp. 116–130.

region, whence it was afterwards gradually extended to the whole western hemisphere.[1]

Already in April, 1493, without waiting for the papal sanction, Ferdinand and Isabella bent all their energies to the work of fitting out an expedition for taking possession of "the Indies." First, a department of Indian affairs was created, and at its head was placed Juan Rodriguez de Fonseca, archdeacon of Seville: in Spain a man in high office was apt to be a clergyman. This Fonseca was all-powerful in Indian affairs for the next thirty years. He won and retained the confidence of the sovereigns by virtue of his executive ability. He was a man of coarse fibre, ambitious and domineering, cold-hearted and perfidious, with a cynical contempt — such as low-minded people are apt to call "smart" — for the higher human feelings. He was one of those ugly customers who crush, without a twinge of compunction, whatever comes in their way. The slightest opposition made him furious, and his vindictiveness was insatiable. This dexterous and pushing Fonseca held one after another the bishoprics of Badajoz, Cordova, Palencia, and Conde, the archbishopric of Rosano in Italy, together with the bishopric of Burgos, and he was also principal chaplain to Isabella and afterwards to Ferdinand. As Sir Arthur Helps observes, "the student of early American history will have a bad opinion of many Spanish bishops, if he does not discover that it is Bishop Fonseca who reap-

Juan Rodriguez de Fonseca.

[1] See below, vol. ii. pp. 98–154

pears under various designations."[1] Sir Arthur fitly calls him "the ungodly bishop."

The headquarters of Fonseca and of the Indian department were established at Seville, and a special Indian custom-house was set up at Cadiz. There was to be another custom-house upon the island of Hispaniola (supposed to be Japan), and a minute registry was to be kept of all ships and their crews and cargoes, going out or coming in. Nobody was to be allowed to go to the Indies for any purpose whatever without a license formally obtained. Careful regulations were made for hampering trade and making everything as vexatious as possible for traders, according to the ordinary wisdom of governments in such matters. All expenses were to be borne and all profits received by the crown of Castile, saving the rights formerly guaranteed to Columbus. The cost of the present expedition was partly defrayed with stolen money, the plunder wrung from the worthy and industrious Jews who had been driven from their homes by the infernal edict of the year before. Extensive "requisitions" were also made; in other words, when the sovereigns wanted a ship or a barrel of gunpowder they seized it, and impressed it into the good work of converting the heathen. To superintend this missionary work, a Franciscan monk[2] was selected who had lately distinguished

[1] *History of the Spanish Conquest*, vol. i. p. 487.

[2] Irving calls him a Benedictine, but he is addressed as "fratri ordinis Minorum" in the bull clothing him with apostolic authority in the Indies, June 25, 1493. See Raynaldus, *Annales ecclesiastici*, tom. xi. p. 216. I cannot imagine what M. Harrisse means by calling him "religieux de Saint-Vincent de Paule" (*Christophe Colomb*, tom. ii. p. 55). Vincent de Paul was not born till 1576.

himself as a diplomatist in the dispute with France over the border province of Rousillon. This person was a native of Catalonia, and his name was Bernardo Boyle, which strongly suggests an Irish origin. Alexander VI. appointed him his apostolic vicar for the Indies,[1] and he seems to have been the first clergyman to perform mass on the western shores of the Atlantic. To assist the vicar, the six Indians brought over by Columbus were baptized at Barcelona, with the king and queen for their godfather and godmother. It was hoped that they would prove useful as missionaries, and when one of them presently died he was said to be the first Indian ever admitted to heaven.[2]

Friar Boyle.

The three summer months were occupied in fitting out the little fleet. There were fourteen caravels, and three larger store-ships known as carracks. Horses, mules, and other cattle were put on board,[3] as well as vines and sugar-canes, and the seeds of several European cereals, for it was intended to establish a permanent colony upon Hispaniola. In the course of this work some slight matters of disagreement came up between Columbus and Fonseca, and the question having been referred to the sovereigns, Fonseca was mildly snubbed and told that he must in all respects be guided by the Admiral's wishes. From that time forth this ungodly prelate nourished a deadly ha-

[1] Not for "the New World," as Irving carelessly has it in his *Columbus*, vol. i. p. 346. No such phrase had been thought of in 1493, or until long afterward.

[2] Herrera, *Hist. de las Indias*, decad. i. lib. ii. cap. 5.

[3] *Vita dell' Ammiraglio*, cap. xliv.

tred toward Columbus, and never lost an opportunity for whispering evil things about him. The worst of the grievous afflictions that afterward beset the great discoverer must be ascribed to the secret machinations of this wretch.

At last the armament was ready. People were so eager to embark that it was felt necessary to restrain them. It was not intended to have more than 1,200, but about 1,500 in all contrived to go, so that some of the caravels must have been overcrowded. The character of the company was very different from that of the year before. Those who went in the first voyage were chiefly common sailors. Now there were many aristocratic young men, hot-blooded and feather-headed hidalgos whom the surrender of Granada had left without an occupation. Most distinguished among these was Alonso de Ojeda, a dare-devil of unrivalled muscular strength, full of energy and fanfaronade, and not without generous qualities, but with very little soundness of judgment or character. Other notable personages in this expedition were Columbus's youngest brother Giacomo (henceforth called Diego), who had come from Genoa at the first news of the Admiral's triumphant return; the monk Antonio de Marchena,[1] whom historians have so long confounded with the prior Juan Perez; an Aragonese gentleman named Pedro Margarite, a favourite of the king and destined to work sad mischief; Juan

Notable persons who embarked on the second voyage.

[1] He went as astronomer, from which we may perhaps suppose that scientific considerations had made him one of the earliest and most steadfast upholders of Columbus's views.

Ponce de Leon, who afterwards gave its name to Florida; Francisco de Las Casas, father of the great apostle and historian of the Indies; and, last but not least, the pilot Juan de La Cosa, now charged with the work of chart-making, in which he was an acknowledged master.[1]

The pomp and bustle of the departure from Cadiz, September 25, 1493, at which the Admiral's two sons, Diego and Ferdinand, were present, must have been one of the earliest recollections of the younger boy, then just five years of age.[2] Again Columbus stopped at the Canary islands, this time to take on board goats and sheep, pigs and fowls, for he had been struck by the absence of all such animals on the coasts which he had visited.[3] Seeds of melons, oranges, and lemons were also taken. On the 7th of October the ships weighed anchor, heading a trifle to the south of west, and after a pleasant and uneventful voyage they sighted land on the 3d of November.[4] It

[1] See Harrisse, *Christophe Colomb*, tom. ii. pp. 55, 56; Las Casas, *Hist. de las Indias*, tom. i. p. 498; Fabié, *Vida de Las Casas*, Madrid, 1879, tom. i. p. 11; Oviedo, *Hist. de las Indias*, tom. i. p. 467; Navarrete, *Coleccion de viages*, tom. ii. pp. 143–149.

[2] "E con questo preparamento il mercoledé ai 25 del mese d' settembre dell' anno 1493 un' ora avanti il levar del sole, essendovi io e mio fratel presenti, l' Ammiraglio levò le ancore," etc. *Vita dell' Ammiraglio*, cap. xliv.

[3] Eight sows were bought for 70 maravedis apiece, and "destas ocho puercas se han multiplicado todos los puercos que, hasta hoy, ha habido y hay en todas estas Indias," etc. Las Casas, *Historia*, tom. ii. p. 3.

[4] The relation of this second voyage by Dr. Chanca may be found in Navarrete, tom. i. pp. 198–241; an interesting relation in Italian by Simone Verde, a Florentine merchant then living in

turned out to be a small mountainous island, and as it was discovered on Sunday they called it Dominica. In a fortnight's cruise in these Caribbean waters they discovered and named several islands, such as Marigalante, Guadaloupe, Antigua, and others, and at length reached Porto Rico. The inhabitants of these islands were ferocious cannibals, very different from the natives encountered on the former voyage. There were skirmishes in which a few Spaniards were killed with poisoned arrows. On Guadaloupe the natives lived in square houses made of saplings intertwined with reeds, and on the rude porticoes attached to these houses some of the wooden pieces were carved so as to look like serpents. In some of these houses human limbs were hanging from the roof, cured with smoke, like ham; and fresh pieces of human flesh were found stewing in earthen kettles, along with the flesh of parrots. Now at length, said Peter Martyr, was proved the truth of the stories of Polyphemus and the Læstrygonians, and the reader must look out lest his hair stand on end.[1] These western Læstrygonians were known as Caribbees, Caribales, or Canibales, and have thus furnished an epithet which we have since learned to apply to man-eaters the world over.

Cruise among the cannibal islands.

Valladolid, is published in Harrisse, *Christophe Colomb*, tom. ii. pp. 68–78. The narrative of the curate of Los Palacios is of especial value for this voyage.

[1] Martyr, *Epist.* cxlvii. *ad Pomponium Lætum;* cf. *Odyssey*, x. 119; Thucyd. vi. 2. — Irving (vol. i. p. 385) finds it hard to believe these stories, but the prevalence of cannibalism, not only in these islands, but throughout a very large part of aboriginal America, has been superabundantly proved.

It was late at night on the 27th of November that Columbus arrived in the harbour of La Navidad and fired a salute to arouse the attention of the party that had been left there the year before. There was no reply and the silence seemed fraught with evil omen. On going ashore next morning and exploring the neighbourhood, the Spaniards came upon sights of dismal significance. The fortress was pulled to pieces and partly burnt, the chests of provisions were broken open and emptied, tools and fragments of European clothing were found in the houses of the natives, and finally eleven corpses, identifiable as those of white men, were found buried near the fort. Not one of the forty men who had been left behind in that place ever turned up to tell the tale. The little colony of La Navidad had been wiped out of existence. From the Indians, however, Columbus gathered bits of information that made a sufficiently probable story. It was a typical instance of the beginnings of colonization in wild countries. In such instances human nature has shown considerable uniformity. Insubordination and deadly feuds among themselves had combined with reckless outrages upon the natives to imperil the existence of this little party of rough sailors. The cause to which Horace ascribes so many direful wars, both before and since the days of fairest Helen, seems to have been the principal cause on this occasion. At length a fierce chieftain named Caonabo, from the region of Xaragua, had attacked the Spaniards in overwhelming force, knocked their blockhouse about

Fate of the colony at La Navidad.

their heads, and butchered all that were left of them.

This was a gloomy welcome to the land of promise. There was nothing to be done but to build new fortifications and found a town. The site chosen for this new settlement, which was named Isabella, was at a good harbour about thirty miles east of Monte Christi. It was chosen because Columbus understood from the natives that it was not far from there to the gold-bearing mountains of Cibao, a name which still seemed to signify Cipango. Quite a neat little town was presently built, with church, market-place, public granary, and dwelling-houses, the whole encompassed with a stone wall. An exploring party led by Ojeda into the mountains of Cibao found gold dust and pieces of gold ore in the beds of the brooks, and returned elated with this discovery. Twelve of the ships were now sent back to Spain for further supplies and reinforcements, and specimens of the gold were sent as an earnest of what was likely to be found. At length, in March, 1494, Columbus set forth, with 400 armed men, to explore the Cibao country. The march was full of interest. It is upon this occasion that we first find mention of the frantic terror manifested by Indians at the sight of horses. At first they supposed the horse and his rider to be a kind of centaur, and when the rider dismounted this separation of one creature into two overwhelmed them with supernatural terror. Even when they had begun to get over this notion they

Building of Isabella.

Exploration of Cibao.

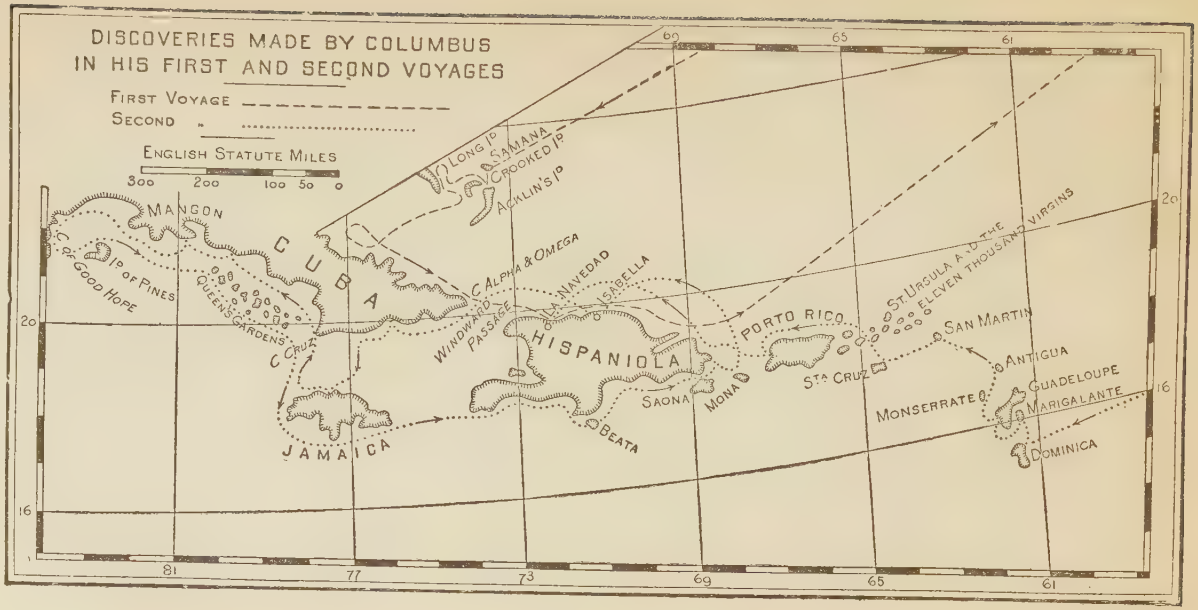
were in dread of being eaten by the horses.[1] These natives lived in houses grouped into villages, and had carved wooden idols and rude estufas for their tutelar divinities. It was ascertained that different tribes tried to steal each other's idols and even fought for the possession of valuable objects of "medicine."[2] Columbus observed and reported the customs of these people with some minuteness. There was nothing that agreed with Marco Polo's descriptions of Cipango, but so far as concerned the discovery of gold mines, the indications were such as to leave little doubt of the success of this reconnaissance. The Admiral now arranged his forces so as to hold the inland regions just visited and gave the general command to Margarite, who was to continue the work of exploration. He left his brother, Diego Columbus, in charge of the colony, and taking three caravels set sail from Isabella on the 24th of April, on a cruise of discovery in these Asiatic waters.

A brief westward sail brought the little squadron into the Windward Passage and in sight of Cape Mayzi, which Columbus on his first voyage had named Cape Alpha and Omega as being the easternmost point on the Chinese coast. He believed that if he were to sail to the right of this cape he should have the continent on his port side for a thousand miles and more, as far as Quinsay and Cambaluc (Peking). If he had

Cape Alpha and Omega.

[1] For an instance of 400 hostile Indians fleeing before a single armed horseman, see *Vita dell' Ammiraglio*, cap. lii.; Las Casas, *Hist.* tom. ii. p. 46.

[2] Compare the Fisherman's story of Drogio, above, pp. 246, 252.


DISCOVERIES MADE BY COLUMBUS
IN HIS FIRST AND SECOND VOYAGES
FIRST VOYAGE
SECOND "
ENGLISH STATUTE MILES
300 200 100 50 0
MANGON
CUBA
I. OF PINES
GOOD HOPE
QUEENS GARDENS
C. CRUZ
JAMAICA
LONG I.
SAMANA
CROOKED I.
ACKLIN'S I.
C. ALPHA & OMEGA
WINDWARD PASSAGE
NAVEDAD
ISABELLA
HISPANIOLA
SAONA
MONA
BEATA
PORTO RICO
STA CRUZ
ST. URSULA & THE ELEVEN THOUSAND VIRGINS
SAN MARTIN
ANTIGUA
GUADELOUPE
MARIGALANTE
MONSERRATE
DOMINICA
69
65
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61

sailed in this direction and had succeeded in keeping to the east of Florida, he would have kept a continent on his port side, and a thousand miles would have taken him a long way toward that Vinland which our Scandinavian friends would fondly have us believe was his secret guiding-star, and the geographical position of which they suppose him to have known with such astounding accuracy. But on this as on other occasions, if the Admiral had ever received any information about Vinland, it must be owned that he treated it very cavalierly, for he chose the course to the left of Cape Mayzi. His decision is intelligible if we bear in mind that he had not yet circumnavigated Hayti and was not yet cured of his belief that its northern shore was the shore of the great Cipango. At the same time he had seen enough on his first voyage to convince him that the relative positions of Cipango and the mainland of Cathay were not correctly laid down upon the Toscanelli map. He had already inspected two or three hundred miles of the coast to the right of Cape Mayzi without finding traces of civilization; and whenever inquiries were made about gold or powerful kingdoms the natives invariably pointed to the south or southwest. Columbus, therefore, decided to try his luck in this direction. He passed to the left of Cape Mayzi and followed the southern coast of Cuba.

Discovery of Jamaica.

By the 3d of May the natives were pointing so persistently to the south and off to sea that he changed his course in that direction and soon came upon the northern coast of the island which we still know by its native name

Jamaica. Here he found Indians more intelligent and more warlike than any he had as yet seen. He was especially struck with the elegance of their canoes, some of them nearly a hundred feet in length, carved and hollowed from the trunks of tall trees. We may already observe that different tribes of Indians comported themselves very differently at the first sight of white men. While the natives of some of the islands prostrated themselves in adoration of these sky-creatures, or behaved with a timorous politeness which the Spaniards mistook for gentleness of disposition, in other places the red men showed fight at once, acting upon the brute impulse to drive away strangers. In both cases, of course, dread of the unknown was the prompting impulse, though so differently manifested. As the Spaniards went ashore upon Jamaica, the Indians greeted them with a shower of javelins and for a few moments stood up against the deadly fire of the cross-bows, but when they turned to flee, a single bloodhound, let loose upon them, scattered them in wildest panic.[1]

Finding no evidences of civilization upon this beautiful island, Columbus turned northward and struck the Cuban coast again at the point which still bears the name he gave it, Cape Cruz. Between the general contour of this end of Cuba and that of the eastern extremity of Cathay upon the Toscanelli map there is a curious resemblance, save that the direc-

Coasting the south side of Cuba.

[1] Bernaldez, *Reyes Católicos*, cap. cxxv. Domesticated dogs were found generally in aboriginal America, but they were very paltry curs compared to these fierce hounds, one of which could handle an unarmed man as easily as a terrier handles a rat.

tion is in the one case more east and west and in the other more north and south. Columbus passed no cities like Zaiton, nor cities of any sort, but when he struck into the smiling archipelago which he called the Queen's Gardens, now known as Cayos de las Doce Leguas, he felt sure that he was among Marco Polo's seven thousand spice islands. On the 3d of June, at some point on the Cuban coast, probably near Trinidad, the crops of several doves were opened and spices found in them. None of the natives here had ever heard of an end to Cuba, and they believed it was endless.[1] The next country to the west of themselves was named Mangon, and it was inhabited by people with tails which they carefully hid by wearing loose robes of cloth. This information seemed decisive to Columbus. Evidently this Mangon was Mangi, the province in which was the city of Zaiton, the province just south of Cathay. And as for the tailed men, the book of Mandeville had a story of some naked savages in eastern Asia who spoke of their more civilized neighbours as wearing clothes in order to cover up some bodily peculiarity or defect. Could there be any doubt that the Spanish caravels had come at length to the coast of opulent Mangi?[2]

[1] As a Greek would have said, ἤπειρος, a continent.

[2] Bernaldez, *Reyes Católicos*, cap. cxxvii. Mr. Irving, in citing these same incidents from Bernaldez, could not quite rid himself of the feeling that there was something strange or peculiar in the Admiral's method of interpreting such information: "Animated by one of the pleasing illusions of his ardent imagination, Columbus pursued his voyage, with a prosperous breeze, along the supposed continent of Asia." (*Life of Columbus*, vol. i. p. 493.) This lends a false colour to the picture, which the general reader

Under the influence of this belief, when a few days later they landed in search of fresh water, and a certain archer, on the lookout for game, caught distant glimpses of a flock of tall white cranes feeding in an everglade, he fled to his comrades with the story that he had seen a party of men clad in long white tunics, and all agreed that these must be the people of Mangon.[1] Columbus sent a small company ashore to find them. It is needless to add that the search was fruitless, but footprints of alligators, interpreted as footprints of griffins guarding hoarded gold,[2] frightened the men back to their ships.

The "people of Mangon."

is pretty sure to make still falser. To suppose the southern coast of Cuba to be the southern coast of Toscanelli's Mangi required no illusion of an "ardent imagination." It was simply a plain common-sense conclusion reached by sober reasoning from such data as were then accessible (i. e. the Toscanelli map, amended by information such as was understood to be given by the natives); it was more probable than any other theory of the situation likely to be devised from those data; and it seems fanciful to us to-day only because knowledge acquired since the time of Columbus has shown us how far from correct it was. Modern historians abound in unconscious turns of expression — as in this quotation from Irving — which project modern knowledge back into the past, and thus destroy the historical perspective. I shall mention several other instances from Irving, and the reader must not suppose that this is any indication of captiousness on my part toward a writer for whom my only feeling is that of sincerest love and veneration.

[1] These tropical birds are called *soldados*, or "soldiers," because their stately attitudes remind one of sentinels on duty. The whole town of Angostura, in Venezuela, was one day frightened out of its wits by the sudden appearance of a flock of these cranes on the summit of a neighbouring hill. They were mistaken for a war-party of Indians. Humboldt, *Voyage aux régions équinoxiales du Nouveau Continent*, tom. ii. p. 314.

[2] See above, p. 287, note.

From the natives, with whom the Spaniards could converse only by signs, they seemed to learn that they were going toward the realm of Prester John;[1] and in such wise did they creep along the coast to the point, some fifty miles west of Broa Bay, where it begins to trend decidedly to the southwest. Before they had reached Point Mangles, a hundred miles farther on, inasmuch as they found this southwesterly trend persistent, the proof that they were upon the coast of the Asiatic continent began to seem complete. Columbus thought that they had passed the point (lat. 23°, long. 145° on Toscanelli's map) where the coast of Asia began to trend steadily toward the southwest.[2] By pursuing this coast he felt sure that he would eventually reach the peninsula (Malacca) which Ptolemy, who knew of it only by vague hearsay, called the

[1] For these events, see Bernaldez, *Reyes Católicos*, cap. cxxiii.; F. Columbus, *Vita dell' Ammiraglio*, cap. lvi.; Muñoz, *Historia del Nuevo Mundo*, lib. v. § 16; Humboldt, *Examen critique*, tom. iv. pp. 237–263; Irving's *Columbus*, vol. i. pp. 491–504.

[2] That is to say, he thought he had passed the coast of Mangi (southern China) and reached the beginning of the coast of Champa (Cochin China; see Yule's *Marco Polo*, vol. ii. p. 213). The name Champa, coming to European writers through an Italian source, was written Ciampa and Ciamba. See its position on the Behaim and Toscanelli maps, and also on Ruysch's map, 1508, below, vol. ii. p. 114. Peter Martyr says that Columbus was sure that he had reached the coast of Gangetic (i. e. what we call Farther) India: "Indiæ Gangetidis continentem eam (Cubæ) plagam esse contendit Colonus." *Epist.* xciii. *ad Bernardinum.* Of course Columbus understood that this region, while agreeing well enough with Toscanelli's latitude, was far from agreeing with his longitude. But from the moment when he turned eastward on his first voyage he seems to have made up his mind that Toscanelli's longitudes needed serious amendment. Indeed he had always used different measurements from Toscanelli.

Golden Chersonese.[1] An immense idea now flitted through the mind of Columbus. If he could reach and double that peninsula he could then find his way to the mouth of the Ganges river; thence he might cross the Indian ocean, pass the Cape of Good Hope (for Dias had surely shown that the way was open), and return that way to Spain after circumnavigating the globe! But fate had reserved this achievement for another man of great heart and lofty thoughts, a quarter of a century later, who should indeed accomplish what Columbus dreamed, but only after crossing another Sea of Darkness, the most stupendous body of water on our globe, the mere existence of which until after Columbus had died no European ever suspected.[2] If Columbus had now sailed about a hundred miles farther, he would have found the end of Cuba, and might perhaps have skirted the northern shore of Yucatan and come upon the barbaric splendours of Uxmal and Campeche. The excitement which such news would have caused in Spain might perhaps have changed all the rest of his life and saved him from the worst of his troubles. But the crews were now unwilling to go farther, and the Admiral realized that it would be impossible to undertake such a voyage as he had in mind with no more than their present outfit. So it was decided to return to Hispaniola.

The Golden Chersonese.

[1] For an account of Ptolemy's almost purely hypothetical and curiously distorted notions about southeastern Asia, see Bunbury's *History of Ancient Geography*, vol. ii. pp. 604–608.

[2] See below, vol. ii. pp 200–210

Upon consultation with La Cosa and others, it was unanimously agreed that they were upon the coast of the continent of Asia. The evidence seemed conclusive. From Cape Mayzi (Alpha and Omega) they had observed, upon their own reckoning, 335 leagues, or about 1,000 geographical miles, of continuous coast running steadily in nearly the same direction.[1] Clearly it was too long for the coast of an island; and then there was the name Mangon = Mangi. The only puzzling circumstance was that they did not find any of Marco Polo's cities. They kept getting scraps of information which seemed to refer to gorgeous kingdoms, but these were always in the dim distance. Still there was no doubt that they had discovered the coast of a continent, and of course such a continent could be nothing else but Asia!

Such unanimity of opinion might seem to leave nothing to be desired. But Columbus had already met with cavillers. Before he started on this cruise from Isabella, some impatient hidalgos, disgusted at finding much to do and little to get, had begun to hint that the Admiral was a humbug, and that his "Indies" were no such great affair after all. In order to silence these ill-natured critics, he sent his notary, accompanied by four witnesses, to every person in those three caravels, to get a sworn statement. If anybody had a grain of doubt about this coast being the coast of Asia, so that you could

[1] The length of Cuba from Cape Mayzi to Cape San Antonio is about 700 English miles. But in following the sinuosities of the coast, and including tacks, the estimate of these pilots was probably not far from correct.

go ashore there and walk on dry land all the way to Spain if so disposed, let him declare his doubts once for all, so that they might now be duly considered. No one expressed any doubts. All declared, under oath, their firm belief. It was then agreed that if any of the number should thereafter deny or contradict this sworn statement, he should have his tongue slit;[1] and if an officer, he should be further punished with a fine of 10,000 maravedis, or if a sailor, with a hundred lashes. These proceedings were embodied in a formal document, dated June 12, 1494, which is still to be seen in the Archives of the Indies at Seville.[2]

A solemn expression of opinion.

Having disposed of this solemn matter, the three caravels turned eastward, touching at the Isle of Pines and coasting back along the south side of Cuba. The headland where the Admiral first became convinced of the significance of the curvature of the coast, he named Cape of Good Hope,[3] believing it to be much nearer the goal which all were seeking than the other cape of that name, discovered by Dias seven years before.

It will be remembered that the Admiral, upon his first voyage, had carried home with him two theories, — first, that in the Cuban coast he had already discovered that of the con-

Vicissitudes of theory.

[1] "É cortada la lengua;" "y le cortarian la lengua." Irving understands it to mean cutting off the tongue. But in those days of symbolism slitting the tip of that unruly member was a recognized punishment for serious lying.

[2] It is printed in full in Navarrete, tom. ii. pp. 143–149.

[3] It is given upon La Cosa's map; see below, vol. ii., frontispiece.

tinent of Asia, secondly that Hispaniola was Cipango. The first theory seemed to be confirmed by further experience; the second was now to receive a serious shock. Leaving Cape Cruz the caravels stood over to Jamaica, leisurely explored the southern side of that island, and as soon as adverse winds would let them, kept on eastward till land appeared on the port bow. Nobody recognized it until an Indian chief who had learned some Spanish hailed them from the shore and told them it was Hispaniola. They then followed that southern coast its whole length, discovering the tiny islands, Beata, Saona, and Mona. Here Columbus, overcome by long-sustained fatigue and excitement, suddenly fell into a death-like lethargy, and in this sad condition was carried all the way to Isabella, and to his own house, where he was put to bed. Hispaniola had thus been circumnavigated, and either it was not Cipango or else that wonderland must be a much smaller affair than Toscanelli and Martin Behaim had depicted it.[1] There was something truly mysterious about these Strange Coasts!

Arrival of Bartholomew Columbus.

When Columbus, after many days, recovered consciousness, he found his brother Bartholomew standing by his bedside. It was six years since they had last parted company at Lisbon, whence the younger brother started for England, while the elder returned to Spain. The news of Christopher's return from his

[1] Hispaniola continued, however, for many years to be commonly identified with Cipango. See note D on Ruysch's map, 1508, below, vol. ii. p. 114.

first voyage found Bartholomew in Paris, whence he started as soon as he could for Seville, but did not arrive there until just after the second expedition had started. Presently the sovereigns sent him with three ships to Hispaniola, to carry supplies to the colony; and there he arrived while the Admiral was exploring the coast of Cuba. The meeting of the two brothers was a great relief to both. The affection between them was very strong, and each was a support for the other. The Admiral at once proceeded to appoint Bartholomew to the office of Adelantado, which in this instance was equivalent to making him governor of Hispaniola under himself, the Viceroy of the Indies. In making this appointment Columbus seems to have exceeded the authority granted him by the second article of his agreement of April, 1492, with the sovereigns;[1] but they mended the matter in 1497 by themselves investing Bartholomew with the office and dignity of Adelantado.[2]

Columbus was in need of all the aid he could summon, for, during his absence, the island had become a pandemonium. His brother Diego, a man of refined and studious habits, who afterwards became a priest, was too mild in disposition to govern the hot-heads who had come to Hispaniola to get rich without labour. They would not submit to the rule of this foreigner. Instead of doing honest work they roamed about the island, abusing the Indians and slaying one another in silly quarrels. Chief among

Mutiny in Hispaniola; desertion of Boyle and Margarite.

[1] See above, p. 417.

[2] Las Casas, *Hist. de las Indias*, tom. ii. p. 80.

the offenders was King Ferdinand's favourite, the commander Margarite; and he was aided and abetted by Friar Boyle. Some time after Bartholomew's arrival, these two men of Aragon gathered about them a party of malcontents and, seizing the ships which had brought that mariner, sailed away to Spain. Making their way to court, they sought pardon for thus deserting the colony, saying that duty to their sovereigns demanded that they should bring home a report of what was going on in the Indies. They decried the value of Columbus's discoveries, and reminded the king that Hispaniola was taking money out of the treasury much faster than it was putting it in; an argument well calculated to influence Ferdinand that summer, for he was getting ready to go to war with France over the Naples affair. Then the two recreants poured forth a stream of accusations against the brothers Columbus, the general purport of which was that they were gross tyrants not fit to be trusted with the command of Spaniards.

No marked effect seems to have been produced by these first complaints, but when Margarite and Boyle were once within reach of Fonseca, we need not wonder that mischief was soon brewing. It was unfortunate for Columbus that his work of exploration was hampered by the necessity of founding a colony and governing a parcel of unruly men let loose in the wilderness, far away from the powerful restraints of civilized society. Such work required undivided attention and extraordinary talent for command. It does not appear that Columbus was lacking in such talent. On the con-

trary both he and his brother Bartholomew seem to have possessed it in a high degree. But the situation was desperately bad when the spirit of mutiny was fomented by deadly enemies at court. I do not find adequate justification for the charges of tyranny brought against Columbus. The veracity and fairness of the history of Las Casas are beyond question; in his divinely beautiful spirit one sees now and then a trace of tenderness even for Fonseca, whose conduct toward him was always as mean and malignant as toward Columbus. One gets from Las Casas the impression that the Admiral's high temper was usually kept under firm control, and that he showed far less severity than most men would have done under similar provocation. Bartholomew was made of sterner stuff, but his whole career presents no instance of wanton cruelty; toward both white men and Indians his conduct was distinguished by clemency and moderation. Under the government of these brothers a few scoundrels were hanged in Hispaniola. Many more ought to have been.

The government of Columbus was not tyrannical.

Of the attempt of Columbus to collect tribute from the native population, and its consequences in developing the system of *repartimientos* out of which grew Indian slavery, I shall treat in a future chapter.[1] That attempt, which was ill-advised and ill-managed, was part of a plan for checking wanton depredations and regulating the relations between the Spaniards and the Indians. The colonists behaved so badly toward

Troubles with the Indians.

[1] See below, vol. ii. pp. 433, 434.

the red men that the chieftain Caonabo, who had destroyed La Navidad the year before, now formed a scheme[1] for a general alliance among the native tribes, hoping with sufficient numbers to overwhelm and exterminate the strangers, in spite of their solid-hoofed monsters and death-dealing thunderbolts. This scheme was revealed to Columbus, soon after his return from the coast of Cuba, by the chieftain Guacanagari, who was an enemy to Caonabo and courted the friendship of the Spaniards. Alonso de Ojeda, by a daring stratagem, captured Caonabo and brought him to Columbus, who treated him kindly but kept him a prisoner until it should be convenient to send him to Spain. But this chieftain's scheme was nevertheless put in operation through the influence of his principal wife Anacaona. An Indian war broke out; roaming bands of Spaniards were ambushed and massacred; and there was fighting in the field, where the natives — assailed by fire-arms and cross-bows, horses and bloodhounds — were wofully defeated.

Mission of Aguado.

Thus in the difficult task of controlling mutinous white men and defending the colony against infuriated red men Columbus spent the first twelvemonth after his return from Cuba. In October, 1495, there arrived in the harbour of Isabella four caravels laden with welcome supplies. In one of these ships came Juan Aguado, sent by the sovereigns to gather information respecting the troubles of the colony. This

[1] The first of a series of such schemes in American history, including those of Sassacus, Philip, Pontiac, and to some extent Tecumseh.

appointment was doubtless made in a friendly spirit, for Columbus had formerly recommended Aguado to favour. But the arrival of such a person created a hope, which quickly grew into a belief, that the sovereigns were preparing to deprive Columbus of the government of the island; and, as Irving neatly says, "it was a time of jubilee for offenders; every culprit started up into an accuser." All the ills of the colony, many of them inevitable in such an enterprise, many of them due to the shiftlessness and folly, the cruelty and lust of idle swash-bucklers, were now laid at the door of Columbus. Aguado was presently won over by the malcontents, so that by the time he was ready to return to Spain, early in 1496, Columbus felt it desirable to go along with him and make his own explanations to the sovereigns. Fortunately for his purposes, just before he started, some rich gold mines were discovered on the south side of the island, in the neighbourhood of the Hayna and Ozema rivers. Moreover there were sundry pits in these mines, which looked like excavations and seemed to indicate that in former times there had been digging done.[1] This discovery confirmed the Admiral in a new theory, which he was beginning to form. If it should turn out that Hispaniola was not Cipango, as the last voyage seemed to suggest, perhaps it might prove to be Ophir![2] Probably these ancient

Discovery of gold mines.

[1] The Indians then living upon the island did not dig, but scraped up the small pieces of gold that were more or less abundant in the beds of shallow streams.

[2] Peter Martyr, *De Rebus Oceanicis*, dec. i. lib. iv.

excavations were made by King Solomon's men when they came here to get gold for the temple at Jerusalem! If so, one might expect to find silver, ivory, red sandal-wood, apes, and peacocks at no great distance. Just where Ophir was situated no one could exactly tell,[1] but the things that were carried thence to Jerusalem certainly came from "the Indies." Columbus conceived it as probably lying northeastward of the Golden Chersonese (Malacca) and as identical with the island of Hispaniola.

Speculations about Ophir.

The discovery of these mines led to the transfer of the headquarters of the colony to the mouth of the Ozema river, where, in the summer of 1496, Bartholomew Columbus made a settlement which became the city of San Domingo.[2] Meanwhile Aguado and the Admiral sailed for Spain early in March, in two caravels overloaded with more than two hundred homesick passengers. In choosing his course Columbus did not show so much sagacity as on his

Founding of San Domingo, 1496.

[1] The original Ophir may be inferred, from *Genesis* x. 29, to have been situated where, as Milton says,

> "northeast winds blow
> Sabæan odours from the spicy shore
> Of Araby the Blest,"

but the name seems to have become applied indiscriminately to the remote countries reached by ships that sailed past that coast; chiefly no doubt, to Hindustan. See Lassen, *Indische Alterthumskunde*, bd. i. p. 538.

[2] Bartholomew's town was built on the left side of the river, and was called New Isabella. In 1504 it was destroyed by a hurricane, and rebuilt on the right bank in its present situation. It was then named San Domingo after the patron saint of Domenico, the father of Columbus.

first return voyage. Instead of working northward till clear of the belt of trade-winds, he kept straight to the east, and so spent a month in beating and tacking before getting out of the Caribbean Sea. Scarcity of food was imminent, and it became necessary to stop at Guadaloupe and make a quantity of cassava bread.[1] It was well that this was done, for as the ships worked slowly across the Atlantic, struggling against perpetual head-winds, the provisions were at length exhausted, and by the first week in June the famine was such that Columbus had some difficulty in preventing the crews from eating their Indian captives, of whom there were thirty or more on board.[2]

The return voyage.

At length, on the 11th of June, the haggard and starving company arrived at Cadiz, and Columbus, while awaiting orders from the sovereigns, stayed at the house of his good friend Bernaldez, the curate of Los Palacios.[3] After a month he attended court at Burgos, and was kindly received. No allusion was made to the complaints against him, and the sovereigns promised to furnish ships for a third voyage of discovery. For the moment, how-

[1] While the Spaniards were on this island they encountered a party of tall and powerful women armed with bows and arrows; so that Columbus supposed it must be the Asiatic island of Amazons mentioned by Marco Polo. See Yule's *Marco Polo*, vol. ii. pp. 338–340.

[2] Among them was Caonabo, who died on the voyage.

[3] The curate thus heard the story of the second voyage from Columbus himself while it was fresh in his mind. Columbus also left with him written memoranda, so that for the events of this expedition the *Historia de los Reyes Católicos* is of the highest authority.

ever, other things interfered with this enterprise. One was the marriage of the son and daughter of Ferdinand and Isabella to the daughter and son of the Emperor Maximilian. The war with France was at the same time fast draining the treasury. Indeed, for more than twenty years, Castile had been at war nearly all the time, first with Portugal, next with Granada, then with France; and the crown never found it easy to provide money for maritime enterprises. Accordingly, at the earnest solicitation of Vicente Yañez Pinzon and other enterprising mariners, the sovereigns had issued a proclamation, April 10, 1495, granting to all native Spaniards the privilege of making, at their own risk and expense, voyages of discovery or traffic to the newly found coasts. As the crown was to take a pretty heavy tariff out of the profits of these expeditions, while all losses were to be borne by the adventurers, a fairly certain source of revenue, be it great or small, seemed likely to be opened.[1] Columbus protested against

Edicts of 1495 and 1497.

[1] "All vessels were to sail exclusively from the port of Cadiz, and under the inspection of officers appointed by the crown. Those who embarked for Hispaniola without pay, and at their own expense, were to have lands assigned to them, and to be provisioned for one year, with a right to retain such lands and all houses they might erect upon them. Of all gold which they might collect, they were to retain one third for themselves, and pay two thirds to the crown. Of all other articles of merchandise, the produce of the island, they were to pay merely one tenth to the crown. Their purchases were to be made in the presence of officers appointed by the sovereigns, and the royal duties paid into the hands of the king's receiver. Each ship sailing on private enterprise was to take one or two persons named by the royal officers at Cadiz. One tenth of the tonnage of the ship was to be at the service of the crown, free of charge. One tenth of whatever such

this edict, inasmuch as he deemed himself entitled to a patent or monopoly in the work of conducting expeditions to Cathay. The sovereigns evaded the difficulty by an edict of June 2, 1497, declaring that it was never their intention "in any way to affect the rights of the said Don Christopher Columbus." This declaration was, doubtless, intended simply to pacify the Admiral. It did not prevent the authorization of voyages conducted by other persons a couple of years later; and, as I shall show in the next chapter, there are strong reasons for believing that on May 10, 1497, three weeks before this edict, an expedition sailed from Cadiz under the especial auspices of King Ferdinand, with Vicente Yañez Pinzon for its chief commander and Americus Vespucius for one of its pilots.

It was not until late in the spring of 1498 that the ships were ready for Columbus. Everything that Fonseca could do to vex and delay him was done. One of the bishop's minions, a converted Moor or Jew named Ximeno Breviesca, behaved with such outrageous insolence that on the day of sailing the Admiral's indignation, so long restrained, at last broke out, and he drove away the fellow with kicks and cuffs.[1] This imprudent act gave Fonseca the

Columbus loses his temper.

ships should procure in the newly-discovered countries was to be paid to the crown on their return. These regulations included private ships trading to Hispaniola with provisions. For every vessel thus fitted out on private adventure, Columbus, in consideration of his privilege of an eighth of tonnage, was to have the right to freight one on his own account." Irving's *Columbus*, vol. ii. p. 76.

[1] "Parece que uno debiera de, en estos reveses, y, por ventura, en palábras contra él y contra la negociacion destas Indias, mas

opportunity to maintain that what the Admiral's accusers said about his tyrannical disposition must be true.

The third voyage.

The expedition started on May 30, 1498, from the little port of San Lucar de Barrameda. There were six ships, carrying about 200 men besides the sailors. On June 21, at the Isle of Ferro, the Admiral divided his fleet, sending three ships directly to Hispaniola, while with the other three he kept on to the Cape Verde islands, whence he steered southwest on the 4th of July. A week later, after a run of about 900 miles, his astrolabe seemed to show that he was within five degrees of the equator.[1] There were three reasons for going so far to the south: — 1, the natives of the islands already visited always

que otro señalarse, y segun entendí, no debiera ser cristiano viejo, y creo que se llamaba Ximeno, contra el cual debió el Almirante gravemente sentirse y enojarse, y aguardó el dia que se hizo á la vela, y, ó en la nao que entró, por ventura, el dicho oficial, ó en tierra quando queria desembarcarse, arrebatólo el Almirante, y dále muchas coces ó remesones, por manera que lo trató mal; y á mi parecer, por esta causa principalmente, sobre otras quejas que fueron de acá, y cosas que murmuraron dél y contra él los que bien con él no estaban y le acumularon; los Reyes indignados proveyeron de quitarle la gobernacion." Las Casas, *Historia de las Indias*, tom. ii. p. 199.

[1] The figure given by Columbus is equivalent only to 360 geographical miles (Navarrete, *Coleccion*, tom. i. p. 246), but as Las Casas (*Hist.* tom. ii. p. 226) already noticed, there must be some mistake here, for on a S. W. course from the Cape Verde islands it would require a distance of 900 geographical miles to cut the fifth parallel. From the weather that followed, it is clear that Columbus stated his latitude pretty correctly; he had come into the belt of calms. Therefore his error must be in the distance run.

pointed in that direction when gold was mentioned; 2, a learned jeweller, who had travelled in the East, had assured Columbus that gold and gems, as well as spices and rare drugs, were to be found for the most part among black people near the equator; 3, if he should not find any rich islands on the way, a sufficiently long voyage would bring him to the coast of Champa (Cochin China) at a lower point than he had reached on the preceding voyage, and nearer to the Golden Chersonese (Malacca), by doubling which he could enter the Indian ocean. It will be remembered that he supposed the southwesterly curve in the Cuban coast, the farthest point reached in his second voyage, to be the beginning of the coast of Cochin China according to Marco Polo.

Once more through ignorance of the atmospheric conditions of the regions within the tropics Columbus encountered needless perils and hardships. If he had steered from Ferro straight across the ocean a trifle south of west-southwest, he might have made a quick and comfortable voyage, with the trade-wind filling his sails, to the spot where he actually struck land.[1] As it was, however, he naturally followed the custom then so common, of first running to the parallel upon which he intended to sail. This long southerly run brought him into the belt of calms or neutral zone between the northern and southern trade-winds, a little north of the equator.[2]

The belt of calms.

[1] Humboldt in 1799 did just this thing, starting from Teneriffe and reaching Trinidad in nineteen days. See Bruhn's *Life of Humboldt*, vol. i. p. 263.

[2] "The strength of the trade-winds depends entirely upon the

No words can describe what followed so well as those of Irving: "The wind suddenly fell, and a dead sultry calm commenced, which lasted for eight days. The air was like a furnace; the tar melted, the seams of the ship yawned; the salt meat became putrid; the wheat was parched as if with fire; the hoops shrank from the wine and water casks, some of which leaked and others burst, while the heat in the holds of the vessels was so suffocating that no one could remain below a sufficient time to prevent the damage that was taking place. The mariners lost all strength and spirits, and sank under the oppressive heat. It seemed as if the old fable of the torrid zone was about to be realized; and that they were approaching a fiery region where it would be impossible to exist."[1]

Fortunately, they were in a region where the ocean is comparatively narrow. The longitude reached by Columbus on July 13, when the wind died away, must have been about 36° or 37° W.,

difference in temperature between the equator and the pole; the greater the difference, the stronger the wind. Now, at the present time, the south pole is much colder than the north pole, and the southern trades are consequently much stronger than the northern, so that the neutral zone in which they meet lies some five degrees north of the equator." *Excursions of an Evolutionist*, p. 64.

[1] Irving's *Columbus*, vol. ii. p. 137. One is reminded of a scene in the *Rime of the Ancient Mariner*: —

"All in a hot and copper sky
The bloody sun, at noon,
Right up above the mast did stand,
No bigger than the moon.

"Day after day, day after day,
We stuck, — nor breath nor motion;
As idle as a painted ship
Upon a painted ocean."

and a run of only 800 miles west from that point would have brought him to Cayenne. His course between the 13th and 21st of July must have intersected the thermal equator, or line of greatest mean annual heat on the globe, — an irregular curve which is here deflected as much as five degrees north of the equinoctial line. But although there was not a breath of wind, the powerful equatorial current was quietly driving the ships, much faster than the Admiral could have suspected, to the northwest and toward land. By the end of that stifling week they were in latitude 7° N., and caught the trade-wind on the starboard quarter. Thence after a brisk run of ten days, in sorry plight, with ugly leaks and scarcely a cask of fresh water left, they arrived within sight of land. Three mountain peaks loomed up in the offing before them, and as they drew nearer it appeared that those peaks belonged to one great mountain; wherefore the pious Admiral named the island Trinidad.

Here some surprises were in store for Columbus. Instead of finding black and woolly-haired natives, he found men of cinnamon hue, like those in Hispaniola, only — strange to say — lighter in colour. Then in coasting Trinidad he caught a glimpse of land at the delta of the Orinoco, and called it Isla Santa, or Holy Island.[1]

Trinidad and the Orinoco.

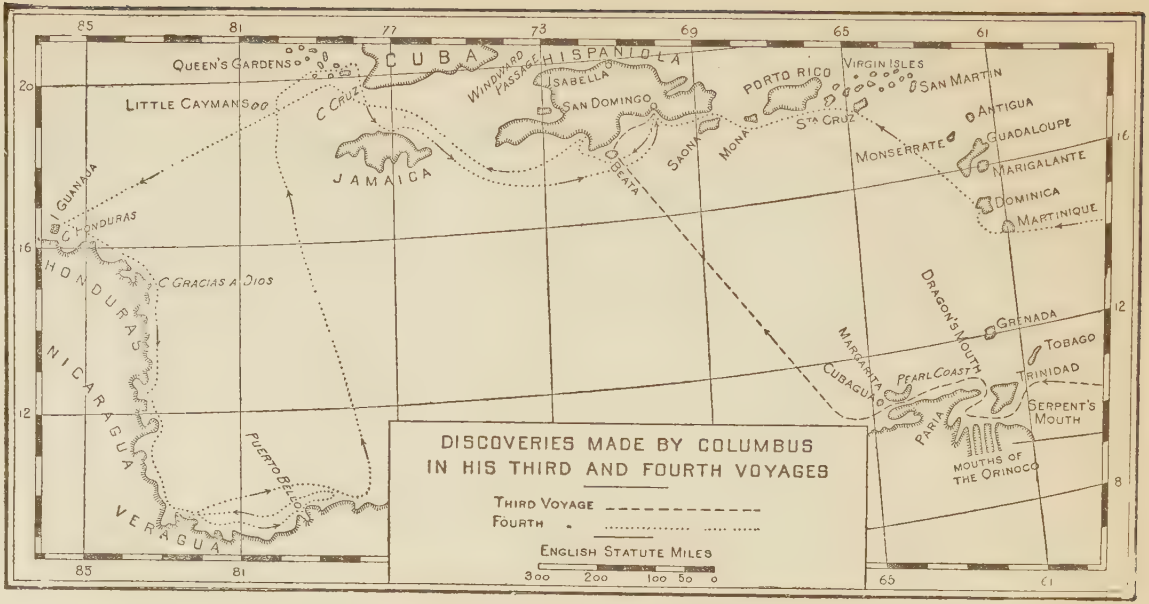
[1] He "gave it the name of Isla Santa," says Irving (vol. ii. p. 140), "little imagining that he now, for the first time, beheld that continent, that Terra Firma, which had been the object of his earnest search." The reader of this passage should bear in mind that the continent of South America, which nobody had ever heard of, was *not* the object of Columbus's search. The Terra

But, on passing into the gulf of Paria, through the strait which he named Serpent's Mouth, his ships were in sore danger of being swamped by the raging surge that poured from three or four of the lesser mouths of that stupendous river. Presently, finding that the water in the gulf was fresh to the taste, he gradually reasoned his way to the correct conclusion, that the billows which had so nearly overwhelmed him must have come out from a river greater than any he had ever known or dreamed of, and that so vast a stream of running water could be produced only upon land of continental dimensions.[1] This coast to the south of him was, therefore, the coast of a continent, with indefinite extension toward the south, a land not laid down upon Toscanelli's or any other map, and of which no one had until that time known anything.[2]

Firma which was the object of his search was the mainland of Asia, and that he never beheld, though he felt positively sure that he had already set foot upon it in 1492 and 1494.

[1] A modern traveller thus describes this river: "Right and left of us lay, at some distance off, the low banks of the Apuré, at this point quite a broad stream. But before us the waters spread out like a wide dark flood, limited on the horizon only by a low black streak, and here and there showing a few distant hills. This was the Orinoco, rolling with irrepressible power and majesty sea-wards, and often upheaving its billows like the ocean when lashed to fury by the wind. . . . The Orinoco sends a current of fresh water far into the ocean, its waters — generally green, but in the shallows milk-white — contrasting sharply with the indigo blue of the surrounding sea." Bates, *Central America, the West Indies, and South America*, 2d ed., London, 1882, pp. 234, 235. The island of Trinidad forms an obstacle to the escape of this huge volume of fresh water, and hence the furious commotion at the two outlets, the Serpent's Mouth and Dragon's Mouth, especially in July and August, when the Orinoco is swollen with tropical rains.

[2] In Columbus's own words, in his letter to the sovereigns de-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CUBA
HISPANIOLA
QUEEN'S GARDENS
LITTLE CAYMAN
C CRUZ
WINDWARD PASSAGE
ISABELLA
SAN DOMINGO
PORTO RICO
VIRGIN ISLES
SAN MARTIN
ANTIGUA
GUADALOUPE
MONSERRATE
MARIGALANTE
DOMINICA
MARTINIQUE
JAMAICA
MONA
SAONA
SIGUATA
STA CRUZ
I GUANAJA
C HONDURAS
HONDURAS
C GRACIAS A DIOS
NICARAGUA
VERAGUA
PUERTO BELLO
DRAGON'S MOUTH
GRENADA
TOBAGO
TRINIDAD
MARGARITA
CUBAGUA
PEARL COAST
PARIA
SERPENT'S MOUTH
MOUTHS OF THE ORINOCO
DISCOVERIES MADE BY COLUMBUS
IN HIS THIRD AND FOURTH VOYAGES
THIRD VOYAGE
FOURTH
ENGLISH STATUTE MILES
300 200 100 50 0

In spite of the correctness of this surmise, Columbus was still as far from a true interpretation of the whole situation as when he supposed Hispaniola to be Ophir. He entered upon a series of speculations which forcibly remind us how empirical was the notion of the earth's rotundity before the inauguration of physical astronomy by Galileo, Kepler, and Newton. We now know that our planet has the only shape possible for such a rotating mass that once was fluid or nebulous, the shape of a spheroid slightly protuberant at the equator and flattened at the poles; but this knowledge is the outcome of mechanical principles utterly unknown and unsuspected in the days of Columbus. He understood that the earth is a round body, but saw no necessity for its being strictly spherical or spheroidal. He now suggested that it was probably shaped like a pear, rather a blunt and corpulent pear, nearly spherical in its lower part, but with a short, stubby apex in the equatorial region somewhere beyond the point which he had just reached. He fancied he had been sailing up a gentle slope from the burning glassy sea where his ships had been becalmed to this strange and beautiful coast where he found the climate enchanting. If he were to follow up the mighty river just now revealed, it might lead him to the summit of this apex of the world, the place where the terrestrial paradise, the Garden which the Lord

Speculations as to the earth's shape.

The mountain of Paradise.

scribing this third voyage, "Y digo que . . . viene este rio y procede de tierra infinita, pues al austro, de la cual fasta agora no se ha habido noticia." Navarrete, *Coleccion*, tom. i. p. 262.

planted eastward in Eden, was in all probability situated![1]

As Columbus still held to the opinion that by keeping to the west from that point he should soon reach the coast of Cochin China, his conception of the position of Eden is thus pretty clearly indicated. He imagined it as situated about on the equator, upon a continental mass till then unknown, but evidently closely connected with the continent of Asia if not a part of it. If he had lived long enough to hear of Quito and its immense elevation, I should suppose that might very well have suited his idea of the position of Eden. The coast of this continent, upon which he had now arrived, was either continuous with the coast of Cochin China (Cuba) and Malacca, or would be found to be divided from it by a strait through which one might pass directly into the Indian ocean.

Relation of the "Eden continent" to "Cochin China."

It took some little time for this theory to come to maturity in the mind of Columbus. Not expecting to find any mainland in that quarter, he began by calling different points of the coast different islands. Coming out through the passage which he named Dragon's Mouth, he caught distant glimpses of Tobago and Grenada to starboard, and turning westward followed the Pearl Coast as far as the islands of Margarita and Cuba-

The Pearl Coast.

[1] Thus would be explained the astounding force with which the water was poured down. It was common in the Middle Ages to imagine the terrestial paradise at the top of a mountain. See Dante, *Purgatorio*, canto xxviii. Columbus quotes many authorities in favour of his opinion. The whole letter is worth reading. See Navarrete, tom. i. pp. 242–264.

gua. The fine pearls which he found there in abundance confirmed him in the good opinion he had formed of that country. By this time, the 15th of August, he had so far put facts together as to become convinced of the continental character of that coast, and would have been glad to pursue it westward. But now his strength gave out. During most of the voyage he had suffered acute torments with gout, his temperature had been very feverish, and his eyes were at length so exhausted with perpetual watching that he could no longer make observations. So he left the coast a little beyond Cubagua, and steered straight for Hispaniola, aiming at San Domingo, but hitting the island of Beata because he did not make allowance for the westerly flow of the currents. He arrived at San Domingo on the 30th of August, and found his brother Bartholomew, whom he intended to send at once on a further cruise along the Pearl Coast, while he himself should be resting and recovering strength.

Arrival at San Domingo.

But alas! there was to be no cruising now for the younger brother nor rest for the elder. It was a sad story that Bartholomew had to tell. War with the Indians had broken out afresh, and while the Adelantado was engaged in this business a scoundrel named Roldan had taken advantage of his absence to stir up civil strife. Roldan's rebellion was a result of the ill-advised mission of Aguado. The malcontents in the colony interpreted the Admiral's long stay in Spain as an indication that he had lost favour with the sovereigns and was not coming back to the is-

Roldan's rebellion.

land. Gathering together a strong body of rebels, Roldan retired to Xaragua and formed an alliance with the brother of the late chieftain Caonabo. By the time the Admiral arrived the combination of mutiny with barbaric warfare had brought about a frightful state of things. A party of soldiers, sent by him to suppress Roldan, straightway deserted and joined that rebel. It thus became necessary to come to terms with Roldan, and this revelation of the weakness of the government only made matters worse. Two wretched years were passed in attempts to restore order in Hispaniola, while the work of discovery and exploration was postponed. Meanwhile the items of information that found their way to Spain were skilfully employed by Fonseca in poisoning the minds of the sovereigns, until at last they decided to send out a judge to the island, armed with plenary authority to make investigations and settle disputes. The glory which Columbus had won by the first news of the discovery of the Indies had now to some extent faded away. The enterprise yielded as yet no revenue and entailed great expense; and whenever some reprobate found his way back to Spain, the malicious Fonseca prompted him to go to the treasury with a claim for pay alleged to have been wrongfully withheld by the Admiral. Ferdinand Columbus tells how some fifty such scamps were gathered one day in the courtyard of the Alhambra, cursing his father and catching hold of the king's robe, crying, "Pay us! pay us!" and as he and his brother Diego, who were pages in the queen's service, hap-

Fonseca's machinations.

pened to pass by, they were greeted with hoots: — "There go the sons of the Admiral of Mosquito-land, the man who has discovered a land of vanity and deceit, the grave of Spanish gentlemen!"[1]

An added sting was given to such taunts by a great event that happened about this time. In the summer of 1497, Vasco da Gama started from Lisbon for the Cape of Good Hope, and in the summer of 1499 he returned, after having doubled the cape and crossed the Indian ocean to Calicut on the Malabar coast of Hindustan. His voyage was the next Portuguese step sequent upon that of Bartholomew Dias. There was nothing questionable or dubious about Gama's triumph. He had seen splendid cities, talked with a powerful Rajah, and met with Arab vessels, their crews madly jealous at the unprecedented sight of Christian ships in those waters; and he brought back with him to Lisbon nutmegs and cloves, pepper and ginger, rubies and emeralds, damask robes with satin linings, bronze chairs with cushions, trumpets of carved ivory, a sunshade of crimson satin, a sword in a silver scabbard, and no end of such gear.[2] An old civilization had been found and a route of commerce discovered, and a factory was to be set up at once on that Indian coast. What a contrast to the miserable performance of Columbus, who had started with the flower of Spain's chivalry for rich Ci-

Gama's voyage to Hindustan, 1497.

[1] "Ecco i figliuoli dell' Ammiraglio de' Mosciolini, di colui che ha trovate terre di vanitá e d' inganno, per sepoltura e miseria de' gentiluomini castigliani." *Vita dell' Ammiraglio*, cap. lxxxiv.

[2] Major, *Prince Henry the Navigator*, pp. 398–401.

pango, and had only led them to a land where they must either starve or do work fit for peasants, while he spent his time in cruising among wild islands! The king of Portugal could now snap his fingers at Ferdinand and Isabella, and if a doubt should have sometimes crossed the minds of those chagrined sovereigns, as to whether this plausible Genoese mariner might not, after all, be a humbug or a crazy enthusiast, we can hardly wonder at it.

Fonseca's creature, Bobadilla.

The person sent to investigate the affairs of Hispaniola was Francisco de Bobadilla, a knight commander of the order of Calatrava. He carried several documents, one of them directing him to make inquiries and punish offenders, another containing his appointment as governor, a third commanding Columbus and his brothers to surrender to him all fortresses and other public property.[1] The two latter papers were to be used only in case of such grave misconduct proved against Columbus as to justify his removal from the government. These papers were made out in the spring of 1499, but Bobadilla was not sent out until July, 1500. When he arrived at San Domingo on the 23d of August, the insurrection had been suppressed; the Admiral and Bartholomew were bringing things into order in distant parts of the island, while Diego was left in command at San Domingo. Seven ringleaders had just been hanged, and five more were in prison under sentence of death. If Bobadilla had not

[1] The documents are given in Navarrete, *Coleccion de viages*, tom. ii. pp. 235–240; and, with accompanying narrative, in Las Casas, *Hist. de las Indias*, tom. ii. pp. 472–487.

come upon the scene this wholesome lesson might have worked some improvement in affairs.[1] He destroyed its moral in a twinkling. The first day after landing, he read aloud, at the church door, the paper directing him to make inquiries and punish offenders; and forthwith demanded of Diego Columbus that the condemned prisoners should be delivered up to him. Diego declined to take so important a step until he could get orders from the Admiral. Next day Bobadilla read his second and third papers, proclaimed himself governor, called on Diego to surrender the fortress and public buildings, and renewed his demand for the prisoners. As Diego still hesitated to act before news of these proceedings could be sent to his brother, Bobadilla broke into the fortress, took the prisoners out, and presently set them free. All the rebellious spirits in the colony were thus drawn to the side of Bobadilla, whose royal commission, under such circumstances, gave him irresistible power. He threw Diego into prison and loaded him with fetters. He seized the Admiral's house, and confiscated all his personal property, even including his business papers and private letters. When the Admiral arrived in San Domingo, Bobadilla, without even waiting to see him, sent an officer to put him in irons and take him to prison. When Bartholomew arrived, he received the same treatment. The three brothers were

Columbus in chains.

[1] No better justification for the government of the brothers Columbus can be found than to contrast it with the infinitely worse state of affairs that ensued under the administrations of Bobadilla and Ovando. See below, vol. ii. pp. 435–446.

confined in different places, nobody was allowed to visit them, and they were not informed of the offences with which they were charged. While they lay in prison, Bobadilla busied himself with inventing an excuse for this violent behaviour. Finally he hit upon one at which Satan from the depths of his bottomless pit must have grimly smiled. He said that he had arrested and imprisoned the brothers only because he had reason to believe they were inciting the Indians to aid them in resisting the commands of Ferdinand and Isabella!! In short, from the day of his landing Bobadilla made common cause with the insurgent rabble, and when they had furnished him with a ream or so of charges against the Admiral and his brothers, it seemed safe to send these gentlemen to Spain. They were put on board ship, with their fetters upon them, and the officer in charge was instructed by Bobadilla to deliver them into the hands of Bishop Fonseca, who was thus to have the privilege of glutting to the full his revengeful spite.

The master of the ship, shocked at the sight of fetters upon such a man as the Admiral, would have taken them off, but Columbus would not let it be done. No, indeed! they should never come off except by order of the sovereigns, and then he would keep them for the rest of his life, to show how his labours had been rewarded.[1] The event — which always justifies true manliness — proved the sagacity of this proud

Return to Spain.

[1] Las Casas, *Hist. de las Indias*, tom. ii. p. 501; F. Columbus, *Vita dell' Ammiraglio*, cap. lxxxv. Ferdinand adds that he had often seen these fetters hanging in his father's room.

demeanour. Fonseca was baulked of his gratification. The clumsy Bobadilla had overdone the business. The sight of the Admiral's stately and venerable figure in chains, as he passed through the streets of Cadiz, on a December day of that year 1500, awakened a popular outburst of sympathy for him and indignation at his persecutors. While on the ship he had written or dictated a beautiful and touching letter[1] to a lady of whom the queen was fond, the former nurse of the Infante, whose untimely death, three years since, his mother was still mourning. This letter reached the court at Granada, and was read to the queen before she had heard of Bobadilla's performances from any other quarter. A courier was sent in all haste to Cadiz, with orders that the brothers should at once be released, and with a letter to the Admiral, inviting him to court and enclosing an order for money to cover his expenses. The scene in the Alhambra, when Columbus arrived, is one of the most touching in history. Isabella received him with tears in her eyes, and then this much-enduring old man, whose proud and masterful spirit had so long been proof against all wrongs and insults, broke down. He threw himself at the feet of the sovereigns in an agony of tears and sobs.[2]

Release of Columbus.

How far the sovereigns should be held responsible for the behaviour of their agent is not altogether easy to determine. The appointment of such a creature as Bobadilla was a sad blunder, but one

[1] It is given in full in Las Casas, *op. cit.* tom. ii. pp. 502–510.

[2] Herrera, *Historia*, dec. i. lib. iv. cap. 10.

such as is liable to be made under any government. Fonseca was very powerful at court, and Bobadilla never would have dared to proceed as he did if he had not known that the bishop would support him. Indeed, from the indecent haste with which he went about his work, without even the pretence of a judicial inquiry, it is probable that he started with private instructions from that quarter. But, while Fonseca had some of the wisdom along with the venom of the serpent, Bobadilla was simply a jackass, and behaved so that in common decency the sovereigns were obliged to disown him. They took no formal or public notice of his written charges against the Admiral, and they assured the latter that he should be reimbursed for his losses and restored to his viceroyalty and other dignities.

How far were the sovereigns responsible for Bobadilla?

This last promise, however, was not fulfilled; partly, perhaps, because Fonseca's influence was still strong enough to prevent it, partly because the sovereigns may have come to the sound and reasonable conclusion that for the present there was no use in committing the government of that disorderly rabble in Hispaniola to a foreigner. What was wanted was a Spanish priest, and a military priest withal, of the sort that Spain then had in plenty. Obedience to priests came natural to Spaniards. The man now selected was Nicolas de Ovando, a knight commander of the order of Alcántara, of whom we shall have more to say hereafter.[1] Suffice it now to observe that he proved himself a famous

Ovando, another creature of Fonseca, appointed governor of Hispaniola.

[1] See below, vol. ii. pp. 435–446.

disciplinarian, and that he was a great favourite with Fonseca, to whom he seems to have owed his appointment. He went out in February, 1502, with a fleet of thirty ships carrying 2,500 persons, for the pendulum of public opinion had taken another swing, and faith in the Indies was renewed. Some great discoveries, to be related in the next chapter, had been made since 1498; and, moreover, the gold mines of Hispaniola were beginning to yield rich treasures.

Purpose of Columbus's fourth voyage.

But, while the sovereigns were not disposed to restore Columbus to his viceroyalty, they were quite ready to send him on another voyage of discovery which was directly suggested by the recent Portuguese voyage of Gama. Since nothing was yet known about the discovery of a New World, the achievement of Gama seemed to have eclipsed that of Columbus. Spain must make a response to Portugal. As already observed, the Admiral supposed the coast of his "Eden continent" (South America) either to be continuous with the coast of Cochin China (Cuba) and Malacca, or else to be divided from that coast by a strait. The latter opinion was the more probable, since Marco Polo and a few other Europeans had sailed from China into the Indian ocean without encountering any great continent that had to be circumnavigated. The recent expedition of Vespucius and Ojeda (1499–1500) had followed the northern coast of South America for a long distance to the west of Cubagua, as far as the gulf of Maracaibo. Columbus now decided to return to the coast of Cochin China (Cuba) and

follow the coast southwestward until he should find the passage between his Eden continent and the Golden Chersonese (Malacca) into the Indian ocean. He would thus be able to reach by this western route the same shores of Hindustan which Gama had lately reached by sailing eastward. So confident did he feel of the success of this enterprise, that he wrote a letter to Pope Alexander VI., renewing his vow to furnish troops for the rescue of the Holy Sepulchre.[1] It was no doubt the symptom of a reaction against his misfortunes that he grew more and more mystical in these days, consoling himself with the belief that he was a chosen instrument in the hands of Providence for enlarging the bounds of Christendom. In this mood he made some studies on the prophecies, after the fantastic fashion of his time,[2] and a habit grew upon him of attributing his discoveries to miraculous inspiration rather than to the good use to which his poetical and scientific mind had put the data furnished by Marco Polo and the ancient geographers.

The armament for the Admiral's fourth and last voyage consisted of four small caravels, of from fifty to seventy tons burthen, with crews numbering, all told, 150 men. His brother Bartholomew, and his younger son Ferdinand, then a boy of fourteen, accompanied him. They sailed from Cadiz on the 11th of May, 1502. Crossing the Atlantic.

[1] Navarrete, *Coleccion*, tom. ii. pp. 280–282.

[2] The MS. volume of notes on the prophecies is in the Colombina. There is a description of it in Navarrete, tom. ii. pp. 260–273.

and finally left the Canaries behind on the 26th of the same month. The course chosen was the same as on the second voyage, and the unfailing trade-winds brought the ships on the 15th of June to an island called Mantinino, probably Martinique, not more than ten leagues distant from Dominica. The Admiral had been instructed not to touch at Hispaniola upon his way out, probably for fear of further commotions there until Ovando should have succeeded in bringing order out of the confusion ten times worse confounded into which Bobadilla's misgovernment had thrown that island. Columbus might stop there on his return, but not on his outward voyage. His intention had, therefore, been, on reaching the cannibal islands, to steer for Jamaica, thence make the short run to "Cochin China," and then turn southwards. But as one of his caravels threatened soon to become unmanageable, he thought himself justified in touching at San Domingo long enough to hire a sound vessel in place of her. Ovando had assumed the government there in April, and a squadron of 26 or 28 ships, containing Roldan and Bobadilla, with huge quantities of gold wrung from the enslaved Indians, was ready to start for Spain about the end of June. In one of these ships were 4,000 pieces of gold destined for Columbus, probably a part of the reimbursement that had been promised him. On the 29th of June the Admiral arrived in the harbour and stated the nature of his errand. At the same time, as his practised eye had detected the symptoms of an approaching hurricane, he requested permission to stay in the harbour until it should

be over, and he furthermore sent to the commander of the fleet a friendly warning not to venture out to sea at present. His requests and his warnings were alike treated with contumely. He was ordered to leave the harbour, and did so in great indignation. As his first care was for the approaching tempest, he did not go far but found safe anchorage in a sheltered and secluded cove, where his vessels rode the storm with difficulty but without serious damage. Meanwhile the governor's great fleet had rashly put out to sea, and was struck with fatal fury by wind and wave. Twenty or more ships went to the bottom, with Bobadilla, Roldan, and most of the Admiral's principal enemies, besides all the ill-gotten treasure; five or six shattered caravels, unable to proceed, found their way back to San Domingo; of all the fleet, only one ship arrived safe and sound in Spain, and that, says Ferdinand, was the one that had on board his father's gold. Truly it was such an instance of poetical justice as one does not often witness in this world. "We will not inquire now," says Las Casas, who witnessed the affair, "into this remarkable divine judgment, for at the last day of the world it will be made quite clear to us."[1] If such judgments were more often visited upon the right persons, perhaps the ways of Providence would not have so generally come to be regarded as inscrutable.

Columbus not allowed to stop at San Domingo.

[1] "Aqueste tan gran juicio de Dios no curemos de escudriñallo, pues en el dia final deste mundo nos será bien claro." *Hist. d las Indias*, tom. iii. p. 32; cf. *Vita dell' Ammiraglio*, cap. lxxxvii. As Las Casas was then in San Domingo, having come out in Ovando's fleet, and as Ferdinand Columbus was with his father, the testimony is very direct.

The hurricane was followed by a dead calm, during which the Admiral's ships were carried by the currents into the group of tiny islands called the Queen's Gardens, on the south side of Cuba. With the first favourable breeze he took a southwesterly course, in order to strike that Cochin-Chinese coast farther down toward the Malay peninsula. This brought him directly to the island of Guanaja and to Cape Honduras, which he thus reached without approaching the Yucatan channel.[1]

Arrival at Cape Honduras.

Upon the Honduras coast the Admiral found evidences of semi-civilization with which he was much elated, — such as copper knives and hatchets, pottery of skilled and artistic workmanship, and cotton garments finely woven and beautifully dyed. Here the Spaniards first tasted the *chicha*, or maize beer, and marvelled at the heavy clubs, armed with sharp blades of obsidian, with which the soldiers of Cortes were by and by to become unpleasantly acquainted. The people here wore cotton clothes, and, according to Ferdinand, the women covered themselves as carefully as the Moorish women of Granada.[2] On inquiring as to the sources of gold and other wealth, the Admiral was now referred to the west, evidently to Yucatan and Guatemala, or, as he supposed, to the neighbourhood of the Ganges. Evidently the way to reach these countries

[1] In the next chapter I shall give some reasons for supposing that the Admiral had learned the existence of the Yucatan channel from the pilot Ledesma, coupled with information which made it unlikely that a passage into the Indian ocean would be found that way. See below, vol. ii. p. 92.

[2] *Vita dell' Ammiraglio*, cap. lxxxviii.

was to keep the land on the starboard and search for the passage between the Eden continent and the Malay peninsula.[1] This course at first led Columbus eastward for a greater number of leagues than he could have relished. Wind and current were dead against him, too; and when, after forty days of wretched weather, he succeeded in doubling the cape which marks on that coast the end of Honduras and the beginning of Nicaragua, and found it turning square to the south, it was doubtless joy at this auspicious change of direction, as well as the sudden relief from head-winds, that prompted him to name that bold prominence Cape Gracias a Dios, or Thanks to God.

Cape Gracias a Dios.

As the ships proceeded southward in the direction of Veragua, evidences of the kind of semi-civilization which we recognize as characteristic of that part of aboriginal America grew more and more numerous. Great houses were seen, built of "stone and lime," or perhaps of rubble stone with adobe mortar. Walls were adorned with carvings and pictographs. Mummies were found in a good state of preservation. There were signs of abundant gold; the natives wore plates

The coast of Veragua.

[1] Irving (vol. ii. pp. 386, 387) seems to think it strange that Columbus did not at once turn westward and circumnavigate Yucatan. But if — as Irving supposed — Columbus had not seen the Yucatan channel, and regarded the Honduras coast as continuous with that of Cuba, he could only expect by turning westward to be carried back to Cape Alpha and Omega, where he had already been twice before! In the next chapter, however, I shall show that Columbus may have shaped his course in accordance with the advice of the pilot Ledesma.

of it hung by cotton cords about their necks, and were ready to exchange pieces worth a hundred ducats for tawdry European trinkets. From these people Columbus heard what we should call the first "news of the Pacific Ocean," though it had no such meaning to his mind. From what he heard he understood that he was on the east side of a peninsula, and that there was another sea on the other side, by gaining which he might in ten days reach the mouth of the Ganges.[1] By proceeding on his present course he would soon come to a "narrow place" between the two seas. There was a curious equivocation here. No doubt the Indians were honest and correct in what they tried to tell Columbus. But by the "narrow place" they meant narrow land, not narrow water; not a strait which connected but an isthmus which divided the two seas, not the Strait of Malacca, but the Isthmus of Darien![2] Columbus, of course, understood them to mean the strait for which he was looking, and in his excitement at approaching the long-expected goal he pressed on without waiting to verify the reports of gold mines in the neighbourhood, a thing that could be done at any time.[3] By the 5th of December, however,

Fruitless search for the Strait of Malacca.

[1] Navarrete, *Coleccion de viages*, tom. i. p. 299.

[2] *Vita dell' Ammiraglio*, cap. lxxxix.; Humboldt, *Examen Critique*, tom. i. p. 350.

[3] "Nothing could evince more clearly his generous ambition than hurrying in this brief manner along a coast where wealth was to be gathered at every step, for the purpose of seeking a strait which, however it might produce vast benefit to mankind, could yield little else to himself than the glory of the discovery." Irving's *Columbus*, vol. ii. p. 406. In this voyage, however, the

having reached a point on the isthmus, a few leagues east of Puerto Bello, without finding the strait, he yielded to the remonstrances of the crews, and retraced his course to Veragua. If the strait could not be found, the next best tidings to carry home to Spain would be the certain information of the discovery of gold mines, and it was decided to make a settlement here which might serve as a base for future operations. Three months of misery followed. Many of the party were massacred by the Indians, the stock of food was nearly exhausted, and the ships were pierced by worms until it was feared there would be no means left for going home. Accordingly, it was decided to abandon the enterprise and return to Hispaniola.[1] In order to allow for the strong westerly currents in the Caribbean sea, the Admiral first sailed eastward almost to the gulf of Darien, and then turned to the north. The allowance was not enough, however. The ships were again carried into the Queen's Gardens, where they were caught in a storm and nearly beaten to pieces. At length, on St. John's eve, June 23, 1503, the crazy wrecks — now full of water and unable to sail another league — were beached on

Futile attempt to make a settlement.

express purpose from the start was to find the strait of Malacca as a passage to the very same regions which had been visited by Gama, and Columbus expected thus to get wealth enough to equip an army of Crusaders. Irving's statement does not correctly describe the Admiral's purpose, and as savouring of misplaced eulogy is sure to provoke a reaction on the part of captious critics.

[1] A graphic account of these scenes, in which he took part, is given by Ferdinand Columbus, *Vita dell' Ammiraglio*, cap. xciii.–cvi.

the coast of Jamaica and converted into a sort of rude fortress; and while two trusty men were sent over to San Domingo in a canoe, to obtain relief, Columbus and his party remained shipwrecked in Jamaica. They waited there a whole year before it proved possible to get any relief from Ovando. He was a slippery knave, who knew how to deal out promises without taking the first step toward fulfilment.

Columbus shipwrecked.

It was a terrible year that Columbus spent upon the wild coast of Jamaica. To all the horrors inseparable from such a situation there was added the horror of mutiny. The year did not end until there had been a pitched battle, in which the doughty Bartholomew was, as usual, victorious. The ringleader was captured, and of the other mutineers such as were not slain in the fight were humbled and pardoned. At length Ovando's conduct began to arouse indignation in San Domingo, and was openly condemned from the pulpit; so that, late in June, 1504, he sent over to Jamaica a couple of ships which brought away the Admiral and his starving party. Ovando greeted the brothers Columbus with his customary hypocritical courtesy, which they well understood. During the past year the island of Hispaniola had been the scene of atrocities such as have scarcely been surpassed in history. I shall give a brief account of them in a future chapter. Columbus was not cheered by what he saw and heard, and lost no time in starting for Spain. On the 7th of November, 1504, after a tempestuous voyage and narrow escape from ship-

A year of misery.

wreck, he landed at San Lucar de Barrameda and made his way to Seville. Queen Isabella was then on her death-bed, and breathed her last just nineteen days later. Last return to Spain.

The death of the queen deprived Columbus of the only protector who could stand between him and Fonseca. The reimbursement for the wrongs which he had suffered at that man's hands was never made. The last eighteen months of the Admiral's life were spent in sickness and poverty. Accumulated hardship and disappointment had broken him down, and he died on Ascension day, May 20, 1506, at Valladolid. Death of Columbus. So little heed was taken of his passing away that the local annals of that city, "which give almost every insignificant event from 1333 to 1539, day by day, do not mention it."[1] His remains were buried in the Franciscan monastery at Valladolid, whence they were removed in 1513 to the monastery of Las Cuevas, at Seville, where the body of his son Diego, second Admiral and Viceroy of the Indies, was buried in 1526. Ten years after this date, the bones of father and son were removed to Hispaniola, to the cathedral of San Domingo; whence they have since been transferred to Havana. The result of so many removals has been to raise doubts as to whether the ashes now reposing at Havana are really those of Columbus and his son; and over this question there has been much critical discussion, of a sort that we may cheerfully leave to those who like to spend their time over such trivialities.

[1] Harrisse, *Notes on Columbus*, New York, 1866, p. 73.

There is a tradition that Ferdinand and Isabella, at some date unspecified, had granted to Columbus, as a legend for his coat-of-arms, the noble motto: —

Á Castilla y á Leon
Nuevo mundo dió Colon,

i. e. "To Castile-and-Leon Columbus gave a New World;" and we are further told that, when the Admiral's bones were removed to Seville, this motto was, by order of King Ferdinand, inscribed upon his tomb.[1] This tradition crumbles under the touch of historical criticism. The Admiral's coat-of-arms, as finally emblazoned under his own inspection at Seville in 1502, quarters the royal Castle-and-Lion of the kingdom of Castile with his own devices of five anchors, and a group of golden islands with a bit of Terra Firma, upon a blue sea. But there is no legend of any sort, nor is anything of the kind mentioned by Las Casas or Bernaldez or Peter Martyr. The first allusion to such a motto is by Oviedo, in 1535, who gives it a somewhat different turn: —

"Nuevo Mundo."

Por Castilla y por Leon
Nuevo mundo halló Colon,

i. e. "For Castile-and-Leon Columbus found a New World." But the other form is no doubt the better, for Ferdinand Columbus, at some time not later than 1537, had adopted it, and it may be read to-day upon his tomb in the cathedral at Seville. The time-honoured tradition has evidently trans-

[1] *Vita del Ammiraglio*, cap. cvii. This is unquestionably a gloss of the translator Ulloa. Cf. Harrisse, *Christophe Colomb*, tom. ii. pp. 177–179.

ferred to the father the legend adopted, if not originally devised, by his son.

But why is this mere question of heraldry a matter of importance for the historian? Simply because it furnishes one of the most striking among many illustrations of the fact that at no time during the life of Columbus, nor for some years after his death, did anybody use the phrase "New World" with conscious reference to *his* discoveries. At the time of his death their true significance had not yet begun to dawn upon the mind of any voyager or any writer. It was supposed that he had found a new route to the Indies by sailing west, and that in the course of this achievement he had discovered some new islands and a bit or bits of Terra Firma of more or less doubtful commercial value. To group these items of discovery into an organic whole, and to ascertain that they belonged to a whole quite distinct from the Old World, required the work of many other discoverers, companions and successors to Columbus. In the following chapter I shall

endeavour to show how the conception of the New World was thus originated and at length became developed into the form with which we are now familiar.